MAY 13 1926

Illinois Medical Journal

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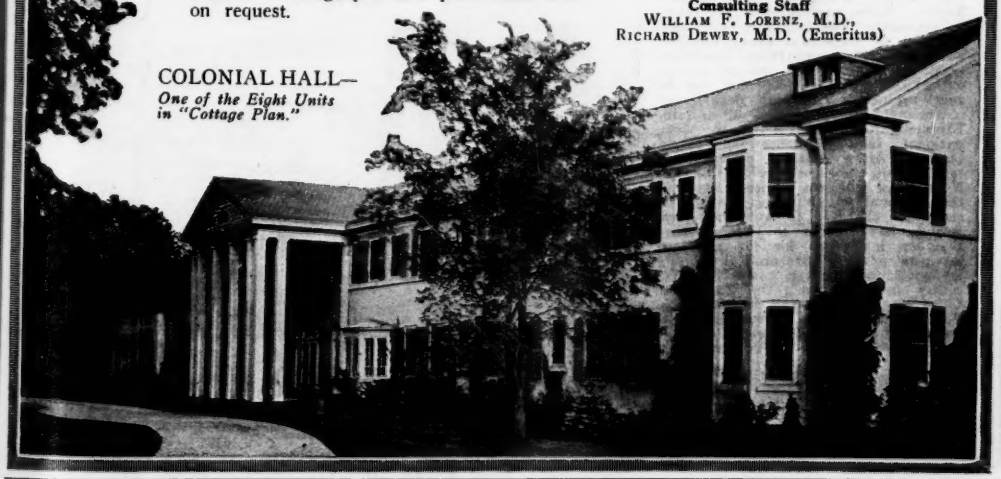

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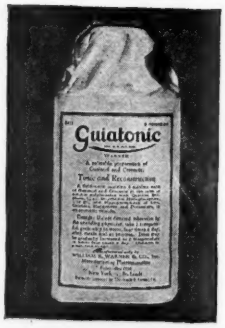
after the acute respiratory diseases, are often found in the tonsils, sinuses, lymph glands and other focal points. These groups of germs lie hidden until some condition arises that permits them to re-attack the tissues, and bring on a recurrence or complication. To cope with these residual infections, Guiatonic has proven itself a worthy and dependable ally. Given as soon as an acute respiratory infection develops, it stimulates and supplements the natural bactericidal, defensive and recuperative forces of the body, thus supplying the aid so generally needed to counteract the attacks of lurking germs—and restore bodily health and resistance.



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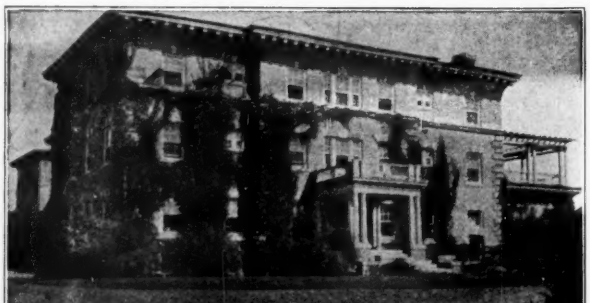

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ILLINOIS MEDICAL JOURNAL

THE OFFICIAL ORGAN OF

THE ILLINOIS STATE MEDICAL SOCIETY

Vol. XLIX | OAK PARK, ILL., MAY, 1926 | No. 5

ILLINOIS MEDICAL JOURNAL

Published monthly by the Illinois State Medical Society under the direction of the Publication Committee of the Council.

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State Society will pay no bills for legal services except those contracted by the Committee. Notify the Chairman at once. Do not employ attorneys.

Send original articles and all communications relating to advertisements to Dr. Charles J. Whalen, Editor, 6221 Kenmore Avenue, Chicago.

Membership correspondence to Dr. Harold M. Camp, Monmouth, Ill.

Society proceedings and news items and changes in the mailing list to Dr. Henry G. Ohls, Managing Editor, 1618 Juneway Terrace, Chicago.

Contributors will submit all copy for publication typewritten on standard size paper and double spaced. Copy not complying with this rule will be returned, if convenient.

Subscription price of this Journal to persons not members of the Illinois State Medical Society is $3.00 per year, in advance, postage prepaid, for the United States, Cuba, Porto Rico, Philippine Islands, Hawaiian Islands and Mexico. $3.50 per year for all foreign countries included in the postal union. Canada, $3.25. Single current copies, 35 cents. Back numbers, after three months from date of publication, 50 cents.

MESSAGE FROM COMMITTEE ON ARRANGEMENTS

The Committee on Arrangements for the 76th Annual Meeting of the Illinois State Medical Society to be held in Champaign-Urbana May 18, 19 and 20, 1926, has endeavored to arrange everything in connection with the meeting for the best interests of our members and guests. It is the desire of this committee, in addition to that of the officers of the Society and others interested, to make this a meeting that we can all point to in later years, with much satisfaction. We are prepared to handle in the Twin-Cities (Champaign-Urbana) a large crowd. If you are unable to get a reservation in our hotels, do not let that keep you away from the meeting. We have many fine rooms close to the meeting places to take care of a very large attendance, so everyone in attendance will have a good place to stay while in our cities. The meeting places are less than a block apart. They are near the shopping and hotel districts. We will have cars to meet our visitors at the train, and take them to headquarters, or their hotel. Our reception committee consists of every member of the Champaign County Society, and if you want anything "ask us." Railroad facilities to these cities are excellent. Many will come in automobiles. We will have ample parking places for all cars. Hard roads run into Champaign-Urbana from all directions. If you come by rail, land or air, you will be cared for comfortably. This is your meeting, and as hosts for the hundreds expecting to attend the meeting we want to extend our personal greeting, and we ask you to make a special effort to attend the meeting, enjoy our hospitality and visit your State University. The University of Illinois invites you to visit the institution during the meeting. We assure you that we will do everything possible to make you feel welcome—all of our business houses, the Chamber of Commerce, every fraternal, commercial, and industrial organization, our educational institutions, and es-

pecially the Champaign County Medical Society will all join in welcoming you. Signed,

EARL D. WISE, *Chairman,*
H. C. KARIHER,
JAS. S. MASON,
J. C. DALLENBACH,
C. GEORGE APPELLE,
Committee on Arrangements.

MEMBER OF THE UNITED STATES CABINET TO OPEN ILLINOIS STATE MEDICAL SOCIETY MEETING

Dr. Hubert Work, secretary of the Interior, will open on May 18 the annual meeting of the Illinois State Medical Society.

His speech transmitted by radio from Washington to Champaign where the convention will be held will treat of matters of moment to the profession of which Dr. Work is a member, as well as of public welfare.

This honor to the State Society will be as democratic as the profession in which Dr. Work made his mark.

Doctor Work's speech will be broadcast from WLS, Chicago, at 7:45 P. M., Standard Time, 8:45 P. M., Chicago Daylight Saving Time.

Tune up your radios and hear what one member of President Coolidge's cabinet thinks about burning questions of the hour.

REDUCED FARE ON RAILROADS FOR CHAMPAIGN-URBANA MEETING

The Western and Central Passenger Association have granted us a fare reduction. The reduced fare on a basis of one and one-half fare on the certificate plan will be granted from any point in Illinois and from St. Louis for all those traveling by rail to Champaign-Urbana.

The following directions are submitted:

Tickets should be purchased at the normal one way fare for the going journey to Champaign-Urbana. These may be bought from May 14 to May 20, inclusive.

Be sure when purchasing your ticket to ask the ticket agent for a Convention Certificate, which will be given you at the time. If the agent is unable to issue a Convention Certificate, ask for a receipt giving the date, destination, and amount paid for the one way ticket.

See that the ticket reads to Champaign and have your certificate or receipt stamped with the same date as your ticket.

Sign your name to the certificate or receipt in ink, in the presence of the agent.

Immediately upon your arrival at Champaign your ticket should be deposited at the Registration Booth.

If the minimum of 250 regularly issued certificates or receipts are presented, they will be validated by an agent of the railroads, and the Secretary of the Society, and you will be granted a return ticket by the same route as the going journey, at one-half of the normal rate.

We hope that every member of the Society, and our guests expecting to attend the meeting will keep this in mind so that the minimum number of certificates will be presented to get the reduced rates.

INVITATION FROM UNIVERSITY OF ILLINOIS

Urbana, Ill., April 19, 1926.

Dr. Harold M. Camp,
Monmouth, Illinois.

Dear Dr. Camp: It is my hope that when the Illinois State Medical Society meets here in May, provision will be made on the program for an inspection of the University of Illinois campus and buildings to enable the delegates to learn something of the physical plant and educational operations of their State University. I am writing this note to extend, through you, a cordial invitation to the society to make such a visit. The University will be glad to provide guides for the delegates and will do all it can to make their visit interesting.

Sincerely yours,
DAVID KINLEY,
President.

DR. HAGGARD, PRESIDENT OF THE A. M. A., WILL BE PRESENT AT ANNUAL MEETING

Dr. W. D. Haggard of Nashville, Tennessee, President of the American Medical Association, will give the oration on surgery at the 76th Annual Meeting of the Society to be held at Champaign-Urbana May 18, 19, 20. The subject of Dr. Haggard's oration is "The Present Status of the Goiter Problem; with Lantern Illustrations." We should consider ourselves very fortunate in persuading Dr. Haggard to attend the meeting and we can be assured that his oration will be one of the important features of the meeting.

ILLINOIS STATE MEDICAL SOCIETY

SEVENTY-SIXTH ANNUAL MEETING
1850—1926

Champaign-Urbana, May 18, 19, 20, 1926

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MEETINGS OF THE HOUSE OF DELEGATES

Tuesday Evening, May 18, 1926

9:00

Meeting called to order by the President, J. C. Krafft, for reports of officers, committees, and other business to come before the House.

Thursday Morning, May 20, 1926

8:00

Meeting called to order by the President for the election of officers, reports of committees and other business.

ENTERTAINMENT

An excellent entertainment is being arranged by the Committee on Arrangements for the ladies, during the entire session. The plans have not yet been perfected, but will appear in the printed program in detail. This will give the ladies an unusual opportunity to see the beauties of the University, the Twin Cities, and to participate in the social affairs being planned for them.

Entertainments for the members and the guests of the society are also planned, but the exact program has not yet been announced.

Alumni and Fraternity banquets can be arranged for, by writing the Committee on Arrangements. It is expected that there will be a number of such banquets, and class reunions during the meeting.

General Sessions

Masonic Temple

Tuesday Evening, May 18, 1926

7:30—Call to order of the Society by the President, J. C. Krafft.

Invocation, Rev. Herbert A. Keck, D. D., Pastor First M. E. Church, Champaign.

Addresses of Welcome—George J. Babb, Mayor of Champaign, and W. F. Burres, M. D., Mayor of Urbana.

Report of the Chairman of the Committee on Arrangements, Earl D. Wise, Chairman, Champaign.

Address, David Kinley, Ph. D., LL.D., President, University of Illinois, "Some Influences Affecting Medical Education." (It is planned to have this address broadcast by the University of Illinois Radio Station.)

Wednesday Afternoon, May 19, 1926

2:00—Oration in Surgery: "The Present Status of the Goiter Problem;" with lantern illustrations, W. D. Haggard, President, American Medical Association, Nashville, Tenn.

4:00 to 6:00—Joint meeting of Sections for Teaching Clinics. Demonstration of Orthopedic and Pediatric Cases. (Names of those participating, to be announced.)

Wednesday Evening, May 19, 1926

7:30—President's Address, J. C. Krafft, President, Illinois State Medical Society. (Subject to be announced.)

Oration in Medicine: "Criminology as Related to Endocrinology," Wm. Engelbach, St. Louis, Mo.

10:00—Entertainment for Members and Guests, given by the Champaign County Medical Society.

Thursday Morning, May 20, 1926

8:00 to 12:00—Teaching Clinics: "Discussion of Medical and Surgical Aspects of Upper Abdominal Diseases." (Names of clinicians and their individual subjects to be announced.)

Secretaries' Conference

Harold Swanberg, President.....Quincy
Elizabeth R. Miner, Vice-President....Macomb
J. S. Templeton, Secretary.....Pinckneyville

Masonic Temple

Tuesday, May 18, 9:30 A. M.

1. The County Secretary's Task in Missouri—E. E. Brunner, Marshall, Mo., formerly secretary of Secretaries' Conference, Missouri State Medical Society.

Discussion, J. S. Templeton, Pinckneyville.

2. The 100% Efficient County Medical Society Secretary—Harold M. Camp, Secretary, Illinois State Medical Society, Monmouth.

Discussion, J. W. Hamilton, Secretary, Jefferson County Medical Society, Mt. Vernon.

3. Political Attitude of Physicians—J. R. Neal, Springfield, Chairman, Legislative Committee, Illinois States Medical Society.

Discussion, E. W. Fiegenbaum, Edwardsville, Ex-President, Illinois State Medical Society.

Observations from the Standpoint of a new Secretary—B. V. McClanahan, Galesburg, Secretary Knox County Medical Society.

Discussion, W. C. Blaine, Tuscola.

5. Remarks by Olin West, Chicago, Secretary, American Medical Association.

6. Remarks by Mather Pfeiffenberger, Alton, President-Elect, Illinois State Medical Society.

7. Remarks by J. C. Krafft, Chicago, President, Illinois State Medical Society.

Every physician regardless of whether or not he is a county secretary, is cordially invited to attend this conference.

Secretaries' Banquet

The Annual Banquet will be held at the Champaign Elks' Club, at 6:00 P. M. Wednesday evening, May 19. Tickets are $1.25 and can be procured from any of the officers of the Conference or at the Registration Desk. There will be some splendid addresses and every physician is invited to attend.

Section Programs

Section on Medicine

B. V. McClanahan, Chairman
Leroy H. Sloan, Secretary
Masonic Temple

Tuesday, May 18, 1:00 P. M.

1:00—Renal Insufficiency and its Treatment—N. C. Iknayan, Charleston.

Discussion, S. E. Munson, Springfield.

1:30—The Cardiac Manifestations of Goiter—Frank O. Deneen, Bloomington.

1:50—Recent Medical Treatment of Goiter; Toxic and Non-Toxic—Henry M. Thomas, Johns Hopkins Hospital, Baltimore. (By invitation.)

Discussion of goiter papers by James H. Hutton, Chicago.

2:30—Fecoliths with Megacolon; Report of a Case (with lantern slides)—Leland H. Anderson, Aurora.

2:50—The Diagnosis and Treatment of Non-Specific Ulcerative Colitis (with lantern slides)—Sidney Portis, Chicago.

Discussion of both papers, James Mason, Urbana.

3:30—The Treatment in Gastric and Duodenal Ulcer—J. B. Beykirch, East St. Louis.

3:50—The Rationale of the Neutralization Treatment of Peptic Ulcer (with lantern slides)—Donald Abbott, Chicago.

Discussion of both papers, Walter Palmer, Chicago.

Wednesday, May 19, 8:00 A. M.

8:00—Polycythemia, Report of a Case with Low Hemoglobin—J. C. Reddington, Galesburg.

Discussion, George Parker, Peoria.

8:30—Some Observations of Etiology and Treatment of Pathological Blood Pressures—Nathan S. Davis III, Chicago.

Discussion to be announced.

9:00—The Conquest of Disease—John J. McShane, State Department of Health, Springfield.

Discussion, S. S. Winner, Springfield.

9:30—Paroxysmal Tachycardia—James Carr, Chicago.

9:50—Coronary Thrombosis—Isadore Trace, Chicago.

Discussion of both papers, Harry Durkin, Peoria, and Frederick Burcky, Chicago.

10:30—Arsenic Therapy in Pulmonary Infections (with lantern slides)—Isadore Pilot, Chicago.

10:50—Newer Therapeutic Methods in the Treatment of Pulmonary Tuberculosis (with lantern slides)—P. S. Winner, Medical Superintendent Municipal Tuberculosis Sanitarium, Chicago.

Discussion both paper, LeRoy H. Sloan, Chicago.

11:30—When the Doctor Dies; What Does He Have to Sell?—Emmet Keating, Chicago.

Wednesday Afternoon, May 19

3:00—Malarial Treatment of Paresis—Charles F. Read, Chicago; John Nerancy, Jacksonville, and H. Tucker, Elgin.

Statement of Limitations and Possibilities in the Treatment of Syphilis of the Nervous System—Peter Bassoe, Chicago.

3:30—Newer Knowledge Concerning Nephritis—W. McKimm Marriott, Professor of Pediatrics and Dean of Washington University Medical School, St. Louis.

Discussion, Warren Pearce, Quincy.

Remainder of time to 6 p. m.—Teaching Clinic of Orthopedic and Pediatric Cases—W. McKimm Marriott and others.

Thursday, May 20, 8:00 to 12:00 A. M.

Teaching Clinics: Medical and Surgical Aspects of Upper Abdominal Diseases. Clinicians to be announced.

SECTION ON SURGERY

Philip H. Kreuscher, Chairman
E. P. Coleman, Secretary

Tuesday, May 18, 1926, 1-5 P. M.

1. Palliative Treatment of Inoperable Cancer—J. K. Narat, Chicago.

Discussion to be opened by C. E. Black, Jacksonville.

2. Further Observations on the Use of Colloidal Gold in Inoperable Cancer—Edward H. Ochsner, Chicago.

Discussion to be opened by Daniel A. Orth, Chicago, and George L. Apfelbach, Chicago.

3. X-Ray Diagnosis of Gall-Bladder Lesions—William A. Brams, Chicago.

Discussion to be opened by W. P. Grinstead, Cairo, and Warren Furey, Chicago.

4. Adenomas of the Recto-Vaginal Septum—C. U. Collins, Peoria.

Discussion to be opened by J. J. Moore, Chicago.

5. Hernia, The Public Health Problem—Edmund Andrews, Chicago.

Discussion to be opened by Flint Bondurant, Cairo.

6. Some Points on the Surgery of Breast Cancer—Jabez N. Jackson, Kansas City, Mo., President-Elect of the American Medical Association. (By invitation.)

7. Cancer of the Bladder—Daniel N. Eisendrath, Chicago.

Discussion to be opened by J. C. R. Wettstein, Effingham.

8. Surgical Treatment of Congenital Umbilical Hernia—H. P. Saunders, Chicago.

Discussion to be opened by William R. Cubbins, Chicago, and A. U. Christiansen, Rockford.

Wednesday, May 19, 1926, 8 A. M. to 12 M.

9. Traumatic Gumma and Its Relation to Compensation Insurance—J. P. Hahn, Galesburg.

Discussion to be opened by S. H. Easton, Peoria, and A. M. Miller, Danville.

10. Clinical Significance of Laboratory Diagnosis—Edward H. Weld, Rockford.

Discussion to be opened by E. P. Sloan, Bloomington.

11. Radium Emanation in the Treatment of Intra-Oral Cancer—F. E. Simpson and R. E. Flesher, Chicago.

Discussion to be opened by Harold Swanberg, Quincy, and C. W. Hanford, Chicago.

12. Surgical Diathermy in Accessible Neoplasms (moving picture demonstration)—D. Kobak, Chicago.

Discussion to be opened by Harold T. Plank, Chicago, and Carl Beck, Chicago.

13. Surgical Treatment of Advanced Osteomyelitis—Don Deal, Springfield.

Discussion to be opened by Emil Beck, Chicago.

14. Retromediastinal Abscesses Complicating Dorsal Pott's Disease—Arthur Steindler, Professor of Orthopedic Surgery, University of Iowa School of Medicine, Iowa City, Iowa. (By invitation.)

15. Spondylitis of Unknown Origin Simulating Typhoid Spine—S. C. Woldenburg, Chicago.

Discussion to be opened by C. W. Hopkins, Chicago, and B. C. Cushway, Chicago.

16. Some Problems in Bone Surgery—J. R. Harger, Chicago.

Discussion to be opened by James H. Finch, Champaign.

Wednesday, May 19, 1926, 3-4 P. M.

17. Surgical Indications in Fibroid Uteri—W. A. Newman Dorland, Chicago.

Discussion to be opened by H. E. Ross, Danville, and Henry Schmitz, Chicago.

18. Emergency Lung Surgery—Donald Macrae, Council Bluffs, Iowa. (By invitation.)

Wednesday, May 19, 4-6 P. M.

Orthopedic and Pediatric Teaching Clinic—Joint Meeting of Medical and Surgical Sections.

Thursday, May 20, 8-12 P. M.

Teaching Clinic—Discussion of the Medical and Surgical Aspects of Upper Abdominal Diseases—Joint Meeting of the Medical and Surgical Sections.

SECTION ON EYE, EAR, NOSE AND THROAT

Chas. Moore Robertson, Chairman.
Louis Ostrom, Secretary.

Elks' Club

Tuesday, May 18, 9 A. M.

DRY CLINICS

1. Labyrinthitis and Brain Abscess following Mastoiditis—George W. Boot, Chicago.

2. Spheno-Palatine Syndrome and Its Relation to Ozena—Harry Pollock, Chicago.

3. The Various Types of Iridectomy—George F. Suker, Chicago.

4. Non-Operative Treatment of Glaucoma—Harry W. Gradle, Chicago.

5. Congenital Dacryocystitis — Harry W. Woodruff, Joliet.

6. Teaching of Oto-Laryngology—Norval H. Pierce, Chicago.

The Annual Section Banquet will be held at 6:30 p. m.

Wednesday, May 19, 8:30 A. M.

1. Otological Complications of Basal Skull Fractures—C. F. Yerger, Chicago.

Discussion, Howard C. Ballenger, Chicago.

2. Observations of the Fundus Oculi in Tryparsamid Treatment of General Paralysis of the Insane—J. C. Roth, Kankakee.

3. Refraction Now, and 40 Years Ago—C. W. Hawley, Chicago.

4. Chronic Suppurative Otitis Media—O. J. Nothenberg, Chicago.

Discussion, Frank J. Novak, Jr., Chicago.

5. Recent Work on the Function of the Semicircular Canals—Coleman Griffith, Champaign. (By invitation.)

6. Facoerisis (with movie demonstration)—W. A. Fisher, Chicago.

Discussion by Harry Woodruff, Joliet.

2:00 P. M.

7. The Signification of Pain in Para-Sinusitis—C. H. Long, Chicago.

8. Endoscopy—H. R. Watkins, Bloomington.

Discussion, Wesley H. Peck, Chicago.

9. Treatment of Suppurative Frontal Sinusitis—A. A. Hayden, Chicago.

Discussion, J. Niess, Carmi.

10. History of Our Specialty—D. D. Barr, Taylorville.

11. Mumps of the Lachrymal Gland—James E. Lebensohn, Chicago.

SECTION OF PUBLIC HEALTH AND HYGIENE

C. H. Diehl, Chairman.
H. V. Gould, Secretary.

Elks' Club

Tuesday, May 18, 1:00 P. M.

1. Some Medical Conditions that Influence Scholastic Standing—Harold T. Larson, B. S., and J. Howard Beard, Urbana.

2. Relation of Women's Clubs to the Public Health Program—Lena K. Sadler, Chicago.

3. Relation of the Dentist to the Public Health—W. F. Whalen, D.D.S., President-elect, Illinois State Dental Society, Peoria. (By invitation.)

Discussion by John Vorachen, Peoria.

4. Practical Methods for Advancing Popular Health Education—Herman N. Bundeson, Commissioner of Health, Chicago.

5. Stream Pollution and Methods of Prevention (with lantern slides)—Mr. Langdon Pearse, Sanitary District of Chicago.

Discussion, Mr. H. F. Ferguson, Chief Sanitary Engineer State of Illinois, Springfield.

6. Standardizing Public Health Practice—C. St. Clair Drake, Chicago.

Discussion, S. S. Winner, Chief, District Health Superintendent Service, Department of Public Health, Springfield.

Wednesday, May 19, 8:00 A. M.

7. Changing Tendencies in Public Health Methods—George Palmer, Springfield.

8. Observation from the Note Book of a Coroner's Physician—Thomas Foley, Chicago.

9. Preventive Medicine in Pediatrics—A. E. Williams, Rock Island.

Discussion, John P. Coughlin, Chicago.

10. The Cancer Outlook—Mr. Frederick L. Hoffman, Consulting Statistician, Prudential Life Insurance Company, Newark, N. J. (By invitation.)

11. Status of Milk Pasteurization in Illinois—I. D. Rawlings, Director, Department of Public Health, State of Illinois, Springfield, and Lewis Shere, Milk Bacteriologist, Department of Public Health.

12. Dangers of Iodine in Treatment of Goiter—James H. Hutton, Chicago.

Discussion, Nathan S. Davis, III, Chicago.

RULES GOVERNING THE PRESENTATION OF PAPERS.

All papers read by members shall be limited to twenty minutes and remarks in discussion to five minutes, floor privilege being allowed only once for the discussion of any one subject.

All papers read before the Society or any of its Sections shall become the property of the Society. Each paper shall be deposited with the Secretary of the Section, when read, and the presentation of a paper to the Illinois State Medical Society shall be considered tantamount to the assurance on the part of the writer that such paper has not already appeared and shall not appear in medical print before it has been published in the Illinois Medical Journal.

A paper not heard in its scheduled turn shall be held subject to the call of the Chairman of the Section at the end of that regular Session, if time permits, or as an alternative at the end of the program.

All discussions shall be confined strictly to the subject in hand.

No paper shall appear in the printed transactions of the meeting, unless read in full or in abstract.

EXHIBITORS AT THE MEETING.

American Medical Association, "Hygeia," Chicago.

Harrower Laboratories, Inc., Glendale, California.

H. G. Fischer Company, Chicago.

Hettinger Brothers Company, St. Louis.

White-Haines Optical Company, Columbus, O.

Abbott Laboratories, North Chicago, Illinois.

Ciba Company, New York City.

McIntosh Electrical Corporation, Chicago.

Cameron Surgical Specialty Company, Chicago.

Horlicks Malted Milk Corporation, Racine, Wis.

Standard Oil Company of New Jersey, New York City.

Mead Johnson Company, Evansville, Ind.

Victor X-ray Corporation, Chicago.

Fellows Medical Manufacturing Company, New York City.

Huston Brothers Company, Chicago.

C. V. Mosby Company, St. Louis.

Deshell Laboratories, Chicago.

Medical Protective Company, Ft. Wayne, Ind.

Chas. H. Phillips Company, New York City.

V. Mueller & Company, Chicago.

A. S. Aloe Company, St. Louis.

De Puy Manufacturing Company, Warsaw, Indiana.

Laboratory Products Company, Cleveland, O.

Merrell-Soule Company, Syracuse, N. Y.

W. B. Saunders Company, Philadelphia, Pa.

Sutliff & Case Company, Peoria, Illinois.

Lavoris Chemical Company, Minneapolis.

Hanovia Chemical & Mfg. Company, Newark, N. J.

Swan-Myers Company, Indianapolis.

Sharp & Smith, Chicago.

W. A. Baum Company, New York City.

E. R. Squibb & Sons, New York City.

In addition to these, there will be scientific and pathological exhibits of unusual interest to all physicians.

NOTES ON EXHIBITS

The American Medical Association exhibit will feature "HYGEIA" their Journal of Individual and Community Health. This most commendable Journal has rapidly come to the front as the leading health magazine, and it should by all means, be in the office of every physician. An opportunity will be given to those who have not yet subscribed, to do so and show their interest in Health, and Community problems. We advise you to chain it to your table, unless you want your patients to walk off with it. Other publications from the American Medical Association Press will also be exhibited, and those members of the Illinois State Medical Society in good standing who have not yet affiliated, can become Fellows of the American Medical Association.

Abbott Laboratories of North Chicago, will have an interesting display in booth number 5. Butesin Picrate Ointment, presents the combined features of anesthesia and antiseptic action, in the same chemical. It is of unusual service in the treatment of burns, leg ulcers, and as a general surgical dressing. Digipoten represents "digitalis at its best." Parresined Lace Mesh Surgical Dressing will warrant much consideration. It has the approval of the Surgeon's office, of the United States Army. They will have on display many of their old reliable preparations, as well as many newer ones, which will appeal to the Medical and Surgical professions represented at the meeting.

Huston Brothers Company, of Chicago will exhibit in spaces number 22 and 23. They have been exhibitors at our meetings for the past twenty years. Their exhibit this year will not only include samples of the latest patterns of the usual full line of staple instruments and appliances, but also a big variety of patterns of entirely new instruments, many of their own invention. Among these are a new type of stethoscope, by which, it is claimed, the foetal heart tone is heard as clear as the ticking of a watch, a new rectal irrigator, a tonsil snare which operates without the use of a wire, new types of surgical needles eliminating many of the disadvantages of other types, a new type of vaginal speculum, and a new line of obstetrical instruments. They will also display a new type of spectacles arranged so that illumination can be given in direct line with the vision.

The value of Transillumination, Direct Illumination, Accurate Diagnosis, Simplified Technique, Cauterization and improved Instrumentation will be demonstrated as applied to all phases of major and minor diagnostic, operative and therapeutic procedure at the exhibit of Cameron's Surgical Specialty Company, Chicago, at space number 11, each day during the meeting. No progressive member of the profession can afford to overlook this demonstration.

The Merrell-Soule Company of Syracuse, N. Y., will exhibit its group of dehydrated milk adaptations, KLIM, powdered Protein Milk, Powdered Lactic Acid Whole Milk, and its new carbohydrate, Vi-Mal-Dex. Representatives will be at the exhibit at all times prepared to discuss the merits of these preparations at all times. Ice cold reliquified KLIM and KLIM wafers will be served at the exhibit and souvenir boxes of the wafers will be given to all Physicians and Physicians' wives desiring them.

H. G. Fischer & Company, Inc., of Chicago will have a splendid, complete exhibit of the latest developments in Electro-physiotherapeutic equipment in booth 2. Special attention will be called to their newest and different diathermy machines, and their new portable diathermy units. They will also exhibit the latest types of Quartz lamp apparatus, Radiant therapy lamps, wave generators, and many types of electrodes, and applicators for the various electrical modalities.

Sharp & Smith of Chicago will occupy spaces 42, 43 and 44. Their exhibit will consist of a full and complete line of the latest and most improved models of surgeon's instruments and appliances, and they cordially invite all physicians and surgeons in attendance to inspect their products. They have many new items for this occasion, which for lack of space, we are unable to mention in this brief announcement.

The Harrower Laboratory, Inc., Glendale, California, has an interesting exhibit of all of their ENDOCRINE

preparations, including a new line of POLYCRINE and MONOCRINES for intramuscular injection in ENDOCRINE disorders. Physicians are cordially invited to visit the HARROWER booth where Mr. E. J. Smith will be "At your service."

Sutliff & Case Company, of Peoria will have in space Number 37, a full and complete line of Pharmaceuticals of their own manufacture, surgical instruments, and office equipment. They wish to meet their old friends and make many new ones at the meeting.

The Deshell Laboratories will exhibit their well known products, Petrolagar plain, and Petrolagar with phenolphthalein. Petrolagar is an emulsification of mineral oil with agar, indicated for use as an intestinal lubricant. An interesting feature of the exhibjt will be the data on the value and application of "habit time" in the treatment of constipation, and the function played by Petrolagar in instigating the normal habit time in the constipated colon.

The C. V. Mosby Company, Medical Publishers of St. Louis, will exhibit their leading publications in booth No. 24. Among the new books in their display will be the new edition of Sutton, "Diseases of the Skin"; Hirschman, "Diseases of the Rectum"; Orr, "Amputations"; Adams, "Asthma"; Ryall, "Operative Cystoscopy"; Beattie-Dickson, "Pathology"; Duke, "Allergy"; Graham, "Empyema Thoracis"; Copher, "Methods in Surgery" and Koehler-Ehrenfest, "Puerperal Fever."

In space Number 26, the Medical Protective Company of Ft. Wayne will have in attendance several of its representatives to confer with its contract holders, or any other members of the profession, relative to the liabilities accruing to the profession, or to explain any point in the service and method of the Company. Any physician is welcome to propound any questions upon the subject of malpractice insurance that he may desire.

Hettinger Brothers of St. Louis will occupy space number 3. They will exhibit the Wappler Portable Telatherm, and other Diathermia appliances. They will also have a full line of surgical instruments, office supplies, etc.

An extensive collection of instruments and apparatus of their own manufacture as well as many important new items from foreign medical centers will be demonstrated by V. Mueller & Co., in spaces number 28 and 29. Among the domestic items are Friend's Liver forceps, De Lees Obstetric and Caesarean Section instruments, miniature headlights, etc. Foreign items are new Trephining sets, several new Stomach and Intestinal Clamps, new bone banding and metal suture sets, etc.

The Chas. H. Phillips Company will exhibit its standard products in space number 27; Phillips Milk of Magnesia, Phospho-muriate of Quinine, Digestible Cocoa Compound and its new dentrifice, Phillips' Dental Magnesia, a superior tooth paste based upon Phillips' milk of magnesia. Your inspection of these products is cordially invited.

The McIntosh Electrical Corporation of Chicago, will have in booths 9 and 10 their latest models of apparatus, including the Biolite, the new infra-red Ray Generator. With 46 years' accumulated experience in the manufacture of Electro-Physiotherapy equipment.

The W. B. Saunders Company, Medical Publishers will be represented in space number 34. They will have a number of recent works, and new editions of other standard books. Among those to be shown at the meeting are, "Young's Urology," in two volumes; Lillienthal's Thoracic Surgery, two volumes; Moynihan's Abdominal Surgery, in two volumes; Bickham's Surgery, in six volumes; Abt's Pediatrics, in eight volumes; Cabot on the Heart, Anders and Boston, "Diagnosis." You are given a most courteous invitation to visit the booth, and look these works over, and see the general line on display.

The Ciba Company, of New York City will exhibit their well known products in booth number 6. Although they will have a large number of their products on exhibition, special emphasis might be made on a few of these preparations. Digifoline "Ciba," Dial "Ciba," Lipiodine "Ciba," Coramine "Ciba," Agomensin "Ciba," and Sistomensin "Ciba" will be of interest to the profession. They will be glad to greet their friends at the meeting and explain their products.

The Hanovia Chemical and Manufacturing Company will greet their friends at booths number 39 and 40. They will exhibit their standard Quartz lamps, THE ALPINE SUN, KROMAYER AND LUXOR, together with an addition to the family, a radiant heat lamp, the "SOLLUX," both the floor stand and desk types. They will also feature a new self-suspending Portable Unit, combination type, a Unit with many unique features that will be of particular interest to the physician. Experienced members of their Staff will be on hand and give any explanations that may be desired, and give literature their products.

Horlicks Malted Milk Corporation of Racine, Wisconsin, will exhibit at booth number 14, the manufacturers of Horlicks, the original Malted Milk are planning to present valuable and interesting facts, demonstrating its unique value as a modified food. "Horlick's" is said to be far more nutritious and digestible than plain milk and therefore, of special service in typhoid and other wasting diseases, as well as for infants, expectant and nursing mothers, convalescents, and the undernourished.

Roentgenologists and Physical Therapists will find the exhibit of the Victor X-Ray Corporation very interesting and well worth visiting. Several of the latest developments of the Engineering and Research Laboratories will be featured.

Three recent additions to the Victor Line of X-ray equipment will be of special interest; the Stabilized X-Ray Timer (especially adapted for "flash" radiography), the Vertical Stereo-Radiographic Unit with Automatic Tube Shift and the Motor-Drive Roentgen Table—all major contributions to the advancement of Roentgenology. Every physician observing the trend of physical therapeutics should take this opportunity to look over the Victor line of Diathermy apparatus (both medical and surgical), also the distinctive features in Victor Ultra-Violet Quartz lamps, the Wanz Mul-

tiple Wave Generator for galvanic and sinusoidal therapy, and Victor Phototherapy Lamps. They are all designed according to the most exacting requirements of the physician, and in view of approved physical therapeutic methods.

The White-Haines Optical Company of Columbus, Ohio, will have an exhibit of scientific instruments such as the Slit Lamp, Clason Visual Acuity Meter, Ophthalmoscopes, Retinoscopes, Ophthalmic Lenses, such as Softlite, Punktals and a complete exhibit on a general optical line. This exhibit should be of unusual interest to all eye specialists, as well as to physicians in general, and special practice, as many of the appliances will aid physicians in general diagnostic work.

Swan-Myers Company, of Indianapolis will in their exhibit, feature the educational side of the treatment of hay fever with pollen extracts. A new skin test will be shown, which makes it easy for the physician who handles only a small number of hay fever cases each year, to give his patient the best service obtainable. The new ampoules of 50% dextrose solution will be on display. A full assortment of the mercurials will be included. Newer products which have a particular advantage over the older ones, will be a feature of the exhibit.

The Standard Oil Company of New Jersey, will feature their "Nujol," "Cream of Nujol," and "Mixtol." Cream of Nujol is a new product, is a white emulsion with an agar combination and is a favorite with children and adults with an aversion to oil. Nujol is a standard, reliable product which is known to all the profession. Mistol is rapidly gaining in popularity with the progressive Nose and Throat men in spite of the fact that it is not even advertised in medical journals, its only presentation occurs in a "sample way" at professional meetings. The Nujol Laboratories will be represented by Dr. E. F. Hitchcock, M.D., Ph.D., who is well known in this capacity to a large and constantly extending circle of professional friends.

The De Puy Manufacturing Company, of Warsaw, Indiana, will exhibit their line of De Puy X-Ray Splints. The exhibit will be in charge of their Illinois representative, Mr. Bates, who will be pleased to meet all members and visitors to the meeting, and show the new features that have been recently added. The De Puy product is the result of doing one thing and doing it well, for a period of 25 years. Their slogan is, "We have a splint for every splint requirement."

Mellins Food Company will occupy space number six. Nutrition is always a subject worthy of serious discussion and there are many details in relation to the use of Mellin's Food, which if thoroughly understood by physicians, would assist them materially in preparing nourishment for children, and for adults. It is the purpose of the representatives in charge of the Mellins Food exhibit to make these details clear to all physicians who are interested, and to whom a cordial invitation is extended to visit the exhibit.

The Fellows Medical Manufacturing Company, will exhibit their "Compound Syrup of Hypophosphites" Fellows and "Laxative Tablets" Fellows. Their representative will be glad to give any information that may be desired from physicians, relative to their products.

The products to be featured by E. R. Squibb & Sons, will include Insulin, Arsenicals, and Biologicals. The Authorized Scarlet Fever Products produced under the patents of Drs. George F. and Gladys Dick will be of especial interest. Representatives of the house of Squibb in attendance at the booth, will be pleased to welcome all visitors and will take pleasure in answering questions and explaining merits of the various products at booth number eight.

Don't fail to visit the A. S. Aloe exhibit. The newest instruments, up to date equipment for the physician's office, and a high grade line of Physio-Therapy equipment will be shown. They will show a new importation of German instruments coming direct from their factory in Germany; the New Super-Diatherm, and the Finsen Deep Therapy Lamp. They will have on display QUALITY merchandise, at the lowest possible prices, and their 50% sale that is held annually by them at the Annual Meeting of this Society.

The Baumanometer exhibit will be in booth 17. How the Lay Public has reacted to the series of advertisements on blood pressure published in HYGEIA by W. A. Baum Company, Inc., will be explained, and the results from this effort to emphasize the importance of health examinations, the danger of worry and self treatment and the folly of the patient who makes blood pressure a fad will be discussed with visitors to the exhibit. A new development of importance will be shown for the first time.

UNIVERSITY OF ILLINOIS EXHIBIT

There will be several interesting exhibits shown by the University of Illinois at the Champaign-Urbana meeting.

The Research Laboratory, under the direction of Dr. Henry B. Ward, will show some interesting parasitology specimens. Among these are:

Two mounts of feces showing different worm eggs.

Three microscopic specimens of intestinal protozoa; Balantidium coli; Leishmania donavoni; Endamoeba histolytica.

One intestinal fluke-Clonorchis sinensis.

Two microscopic slides showing tapeworm and eggs; Diphyllobothrium latum; Taenia echinococcus.

Four microscopic slides showing intestinal Nematoda; American hookworm toto; Trichuris trichiura; European hookworm; Hookworm larvae in migration below skin.

Other very interesting specimens will be shown by various departments of the University, including the new element, Illinium.

RADIOLOGICAL MEETING

Tuesday, May 18, 1926, 1:30 P. M.

Knights of Pythias Hall, Champaign

Central Illinois Radiological Society, Chicago, Roentgen Society—Joint Meeting

Central Illinois Radiological Society.

Harold Swanberg, M.D., President, Quincy.
W. Bain, M.D., Vice-President, Springfield.
H. C. Kariher, M.D., Secretary-Treasurer, Champaign.

Chicago Roentgen Society.

E. L. Jenkinson, M.D., President.
I. S. Trostler, M.D., Vice-President.
E. S. Blaine, M.D., Secretary-Treasurer.

PROGRAM

1. The X-Ray Treatment of Carbuncle—H. A. Chapin, M.D., Jacksonville.

2. The Reaction of the Pancreas to X-Rays—A. C. Ivy, M.D., and B. H. Orndoff, M.D., Chicago.

Discussion, I. S. Trostler, M.D., Chicago.

3. Focal Infection—E. G. Samuel, M.D., New Orleans. (By invitation.)

Discussion, H. W. Grote, M.D., Bloomington.

4. Newer Phases of Cholecystography and Their Interpretations—Sherwood Moore, M.D., St. Louis. (By invitation.)

Discussion, H. B. Magee, M.D., Peoria.

5. Non-Inflammatory Disease in the Region of the Hip Joint—E. G. C. Williams, M.D., Danville.

Discussion, B. C. Cushway, M.D., Chicago.

6. X-ray Diagnosis of Appendicitis with Special Reference to Peristalsis—H. J. Hubeny, M.D., Chicago.

Discussion, P. B. Goodwin, M.D., Peoria.

Every ethical physician is cordially invited to attend this meeting. Immediately following the scientific program there will be a short but very important business meeting, and every Radiologist in Illinois is especially urged to be present. There will be a Radiological Dinner at 6 p. m. on Tuesday, at the Inman Hotel. Tickets can be procured from any officer of the Society, or at the Registration Desk. Every Radiologist and all those interested in Radiology are invited to attend the Dinner.

DR. JABEZ NORTH JACKSON, PRESIDENT-ELECT OF A. M. A., WILL ADDRESS THE STATE MEETING

At the annual meeting of the American Medical Association at Dallas, April 19-23, 1926, Dr. Jackson was unanimously elected to the office of President-Elect of the A. M. A. His name was the only one presented to the House of Delegates as a candidate for this office, which is an unusual honor. Dr. Jackson has consented to give a paper in the Section on Surgery Tuesday afternoon, May 18, and we feel highly honored that he will make his first appearance before a State Medical Society at our meeting, since assuming the office of President-Elect. We are sure that his many friends among the medical profession will be glad to greet him at the Champaign-Urbana Session.

BANQUET FOR OUR DISTINGUISHED GUESTS

In honor of the President and President-Elect of the American Medical Association a complimentary banquet will be held at the Elks Club in Champaign on Tuesday evening, May 18, at six P. M. Members of the House of Delegates, members of the Society and others who wish to attend may procure tickets from the Committee on Arrangements or at the Registration booth. The charge is $1.25 per plate. We expect to have present also at the banquet Doctor David Kinley, President of the University of Illinois.

It would be well for those wishing to attend the banquet to procure tickets as early as possible on account of the fact that the number of plates is limited.

FOR OUR EXHIBITORS

We have had many requests from our exhibitors at the Champaign-Urbana Meeting to refer them to a transfer company equipped to receive the exhibits at Champaign, care for them after they are received, and place them on the floor of the Exhibit Hall on the day before the meeting opens. The Committee on Arrangements has selected the Chester & O'Byrne Transfer Company, 63 Chester Street, Champaign, Illinois. You may ship your exhibit to that company, and notify them of the shipment, so that your orders will be carried out according to your own wishes.

ILLINOIS MEDICAL LABORATORY ASSOCIATION

Tuesday, May 18, 1926.

UNIVERSITY OF ILLINOIS, URBANA.

All persons interested in laboratory work pertaining to bacteriology or the medical sciences are invited, whether members of the association or not.

12:45 P. M.—Luncheon

Southern Tea Room, Green Street, near the campus.

Followed by business and election of officers.

2:30 P. M.—Visits to Laboratories on Campus

The program of scientific papers will be omitted, allowing the entire time for practical demonstrations and discussions on laboratory procedures and technique in the various laboratories on the campus.

1—Department of Bacteriology

Chemistry Building; Prof. F. W. Tanner.

This is an especially well equipped laboratory for the teaching of general Bacteriology, both elementary and advanced. Visitors will find the large collection of micro-organisms interesting, as well as the special equipment of the laboratory.

2—State Water Survey

Chemistry Building; Prof. A. M. Buswell.

The special equipment for the analysis of water, both bacterial and chemical, will attract those persons interested in water analysis.

3—Department of Milk Bacteriology

Dairy Building; Prof. M. J. Prucha.

Visiting laboratory workers should not miss this department. The routine examinations of milk are intermingled with interesting variations, such as the length of time that typhoid bacilli can live in ice cream.

4—Eugenics Laboratory

Prof. Elmer Roberts

Prof. Roberts is working out some valuable material on the inheritance of immunity, and if so, why? Visitors that find the discussion of this subject too deep, will at least be interested in the hairless rats.

5—Laboratory of Animal Pathology

Prof. Robert Graham

A large number of animal diseases afflict man also. Visitors will find much of interest in this laboratory, especially in connection with Rabies, Botulism, Tuberculosis and many other conditions. It is to be noted that this is the only laboratory in the country licensed by the United States Public Health Service to make Botulinus Antitoxin.

ILLINOIS TRACTION SYSTEM WILL GIVE REDUCED RATES

The Illinois Traction System which serves Central Illinois as well as St. Louis, has consented to issue certificates to all those intending to use their lines to travel to the Champaign-Urbana Meeting, and these, when properly validated at the Meeting, will permit a half fare for the return trip. This system maintains first class passenger service between many of our Central Illinois Centers, such as Peoria, Bloomington, Springfield, Decatur, Champaign, Urbana, Danville, and St. Louis, Mo. If you expect to use this system when going to the meeting, ask the agent for a certificate when buying a one way ticket to Champaign, Urbana, have it properly signed, and dated. Present it when registering at the meeting, and it will be returned to you properly validated, so that you will get the return reduction of one-half fare.

RENDER UNTO MEDICINE THAT WHICH IS MEDICINE'S

JUDGE MARCUS KAVANAGH BLAZES A TRAIL IN THE RIGHT DIRECTION

A wholly disinterested sanity test, the like of which the medical profession urges in criminal cases where alienists are requisite, has been put through the Illinois courts.

For this, thanks from Macedonia must be given to Judge Marcus Kavanagh. This jurist asked the Chicago Medical Society to appoint three alienists to serve in the Costello case. Precedent is set. Let it be hoped that in the future it will be followed. Commenting upon Judge Kavanagh's action on its issue of March 12, 1926, and speaking editorially the *Chicago Journal* says:

Judge Kavanagh established precedent which it is fervently hoped will become fixed policy. Three alienists, Drs. Charles Reed, Ralph Hammill and Lewis Pollock examined the condemned murderer, Raymond Costello, seeking to escape

the rope on a plea of insanity, and testified to his sanity. The sentence of death stands.

In commending the act of Judge Kavanagh, and in saying that the Chicago Medical Society deserves with him the thanks of the public, this newspaper does not in the slightest measure reflect upon other alienists of good standing in the community and in their profession, who testified on either side in this case. But Judge Kavanagh's innovation is of such importance to society and apparently may be developed with such readiness into a permanent policy, thereby avoiding confusion and evading injustice in the future, that THE JOURNAL would be derelict to its duty if it did not voice approval of the act.

Since then Costello has been hanged.

This favorable result in insanity procedure was brought about by a resolution passed by the council of the Illinois State Medical Society, September 9, 1925. The resolution mentioned received world wide publicity in the public press and medical publications. The resolution is as follows:

WHEREAS, One of the great responsibilities placed on the State of Illinois is the care, treatment, hospitalization and protection of insane and others in this state affected with like mental incapacity, and to protect normal persons from malfeasance from such persons, especially through the abuse of expert witnesses, a subject that notwithstanding the marked progress of psychiatry has not been given adequate consideration in this state; and

WHEREAS, It is desirable to make necessary revision of the laws in this state on the subject, and also to make provision for properly discharging this great responsibility of the state, and attempting a solution of the difficulties arising from the problem of the criminal insane in this state; therefore, be it

RESOLVED By the Council of the Illinois State Medical Society duly assembled and sitting in quorum in the City of Chicago on Wednesday, September 9, 1925, that the present method of handling expert witnesses in criminal cases involving the question of insanity or mental incapacity is not conducive to the best interests either of the accused or of the community at large; that a law shall be made to modify the current custom of permitting such witnesses to be employed at the discretion of interested parties and that the law shall vest the power of such selection in the hands of the court and such witnesses shall receive their compensation from state funds, thus making their employment a matter of judicial rather than of personal appeal.

A MEDICAL AND DENTAL ARTS BUILDING IN CHICAGO

DOCTOR, HERE IS YOUR INVESTMENT AND SOCIAL CHANCE

THE MEDICAL AND DENTAL ARTS CLUB HAS A PLACE FOR YOU TO PROFIT

In the new Medical and Dental Arts club will be combined a professional and social haven, and a most wise investment for Chicago's 10,000 or 12,000 doctors, dentists and members of allied professions.

Under one roof, in a 23-story building, at the southeast corner of Wabash avenue and Lake street, owned and managed by the professions represented, will be housed every correlative activity.

Professional men are notoriously easy "lambs" when it comes to investments. Here is an opportunity built on the land itself, and carried out by the men whose money is used, to secure a steady, guaranteed revenue.

There is no gamble in "loop" real estate in Chicago. The site chosen for the Medical and Dental Arts club lies between the "loop" and the new Wacker Drive. From sale of memberships to date enough money has been secured to make possible the purchase of a site of 12,000 feet, and the negotiation of a mortgage. On this lien conditions are such that as soon as the building is completed and occupied, revenue therefrom will pay the running expenses of the building and within fifteen years time permit the retirement of the bonds. This will leave the building and the land and the revenues the property of the club members.

On this site of 100x120 frontage the first mortgage bond floated is for $3,100,000.

Though starting first as a purely social organization, the board of directors of the Medical and Dental Arts club has broadened its scope into an institution of fundamental value to the profession from a business as well as social and professional standpoint. The obtaining of the site was in itself a rare opportunity.

Work will begin July 1 on the building and

will be completed by May 1, 1927. Plans are being developed by D. H. Burnham & Co.

This building is accessible by all means of transportation in the city and from every direction. It is one block from Marshall Field & Co.'s stores; one block from Michigan Boulevard, one block from Wacker Drive and one-half block from an elevated railway station. Surface lines are on Wabash avenue as are also omnibuses.

Floor plans at present are: ground and first three other floors, stores and sales rooms preferably for medical and dental supply houses; fifth and sixth floors, two-story auditorium with a seating capacity of 900, abutted by mezzanine floors with smaller meeting rooms accommodating from 100 to 150 persons; also office rooms for the Chicago Medical Society, the Chicago Dental Society and the American Dental association headquarters. Although the Chicago Medical society has been in existence for 75 years, and the Chicago Dental Society for 50 years, and although these organizations are the largest of their kind in the world, neither has or ever has had, a permanent home, but has met always in rented quarters. Also lacking is a permanent place for the preservation of records. Old minute books covering the early days of the Chicago Medical Society are in charge of the Chicago Historical Society as the Chicago Medical Society has no place in which to keep them. The Chicago Dental Society is in an equally uncertain state. Besides these parent societies similiar conditions maintain with a large number of special professional organizations such as the Surgical Society; Society of Internal Medicine; the Industrial Surgeons; the Anaesthetists; the Pediatric, Orthopedic, Ophthalmological and other specialistic groups and similar specialistic groups in dentistry. There are at least a half hundred such bodies. In them about 4,000 of Chicago's 6,000 practicing physicians belong to the Chicago Medical Society and of about 4,000 dentists about 2,500 are members of Chicago Dental Society.

Floors eight to fourteen, sales rooms and commercial offices such as those firms that make of Chicago the leading dental and medical supply center for the United States. These comprise those 750 firms, according to the classified telephone directory, that make and sell products and appliances needed in medicine and dentistry. In the group are surgical instruments and dressings; pharmaceutical products, serums vaccines, office equipment and appliances, office furniture, crutches, braces, trusses, artificial arms and legs, dental supplies equipment and furniture. If made into one great central market time would be saved immensely for busy professional men.

Floors sixteen to twenty, professional offices.

Floors twenty-one and twenty-two, bed rooms for out of town members, thus contributing the essential club feature carried out further in the two upper floors by wash rooms, lounge, smoking and billiard rooms, check rooms and offices. The top floor will have, too, an exceptionally attractive dining room for daily use, for professional dinners and for council and especial society affairs, a group of smaller dining rooms.

This club feature is one for which there is great need among the medical and dental professions. It will be protective, economical and aid in breaking down the professional man's only too common isolation from his fellow man. It is the first step towards the now lacking social life in the routine of a busy doctor. The Medical and Dental Arts Club is a voluntary organization with membership limited to dentists and doctors in good standing with the Chicago Medical Society and the Chicago Dental Society. Aiming to be a holding corporation it is financing its plans by the sale of memberships to put up and operate a building that will be an institution for the common good, and great mutual welfare.

Here is your chance, doctor, to become a partner in a splendid investment. Do not pass it up.

SOCIAL LIFE OF THAT MUCH ABUSED SECTION OF SOCIETY, THE PHYSICIAN'S FAMILY. A MEDICAL ARTS CLUB AT CHICAGO

Chicago follows the lead of other cities in its proposed Medical and Dental Arts club. In this respect the city that is acknowledgedly the medical center of the world is undoubtedly out of step.

Doctors who attended the recent convention at Dallas, Tex., of the American Medical Association, need no conversion to the plan. They have had recent and comforting experience of the convenience and economy of central buildings of this sort dedicated to the social, commercial and scientific uses of medicine and the

allied interests. Houston, Galveston, San Antonio and Ft. Worth, Texas have similar organizations, and they are found both popular and profitable.

The Medical and Dental Arts club of Chicago will go a step further than the institutions that have preceded. This club will feature social life for that much abused section of society, the physician's family, as well as for his relatives and out of town friends. As a community center for scientific expediency, with professional comfort combined, and "dividends on the side" the plan formulated by the Medical and Dental Arts club of Chicago is difficult to surpass. It is the chance of the decade for every ethical physician and dentist in the state of Illinois and should be sponsored fully and freely.

Current membership in this club is getting in "on the ground floor" in the safest, surest and most satisfying opportunity that has been offered physicians and dentists within the memory of the writer.

There is not a section of this club that is not requisite. There is not a section of this club for which already the men and the organizations sponsoring it have not already noted a thousand and one uses.

Elsewhere in the editorial section of this issue will be found a detailed description of the proposed Medical and Dental Arts Club of Chicago.

PERSONS ARE AS GOOD AS THEIR FEET

Neglect of Common Foot Ailments of the Part of the Medical Profession Has Opened Fertile Field for the Quack

Universal attempts to "put the best foot forward" are accentuated by styles in women's clothes and a corresponding influx of patients with foot ailments in the offices of hundreds of physicians. Feet hit one in the eye as never before. Short skirts and pain have done the work.

Unfortunately only too many adults are in the position of the woman who said she could not put the best foot forward because each foot was "worse than the other."

This is a serious subject for physicians, from several standpoints.

Ill-fitting shoes cause many ills and afflictions of otherwise obscure origin, as a consequence of serious foot deformity.

Fischer attributes the frequency of deformities of the foot in the western nations to six couses:

1. Premature teaching of children to walk.
2. Training to turn the toes out.
3. Outward rotation of the foot.
4. Unphysiologic manner of walking.
5. Unnecessary and excessive standing.
6. Incorrect way in which shoes are made.

Boorstein in the Archives of Pediatrics, for March, 1925, says that the term weak foot, or flat foot is applied to a faulty position of the foot, impairing its weight-bearing strength.

In children weak feet and foot strain should be treated immediately when encountered. They should be taught to turn the toes in slightly. Contracted tendo Achilles, rickets, excessive weight and general weakness are the predisposing causes. Direct cause is disproportion between the strength of the foot, and the weight and strain to which it is subjected. Deformity, tired feeling when walking and occasional pain are symptoms of weak feet in children. From infancy much attention should be paid to fitting shoes, and securing the proper standing posture —with feet parallel and with the toes turned in slightly. Causative factors, such as knock knees should be remedied so as to prevent recurrence. Flexible weak feet are treated by strappings and exercises, acute foot strain should be relieved by rest and by adhesive plaster strappings, and the short tendo Achilles should be lengthened either by stretching or by open operation. A metal support of scientific construction may be needed. This however should not be regarded as a permanency.

The general practitioner is forced these days to give more than former attention to the feet of his patients. This has been disregarded for too long and as a consequence charlatans are actually crippling many persons by their "patent" devices and many a firm is reaping rare harvest by its "cure-all" shoes. Bone grafting, tendon transplanting and fracture work occupy the time of orthopedic surgeons and as a result the commoner foot ailments go by the board. One or more foot defects were found in one out of every five recruits who came up before the Medical Examiners during the war.

Few realize that 25 per cent of the bones of the body are in the feet. There are 52 bones in

the feet, or 56 counting the sesamoids. This bony framework held together by ligaments and strengthened by muscles and fascia is one of the important sections of the human anatomy. Yet at least 75 per cent of the persons one passes in the street have something wrong with this part of them.

Arch supports and lay surgical devices are the mecca to which these persons pay tribute. Let a physician go incognito to a shoe store selling "patent shoes" and see what happens to him. Proper fitting shoes will do almost as much to correct foot defects as anything else. But it is a certainty that few hastily trained salesmen and saleswomen in shoe shops with a stand-pat line of chatter are qualified to decide what is proper. Yet they do!

If a foot needs attention it needs expert attention.

A little personal anecdote will help. A physician sent his wife into a store selling a much advertised brand of arch-support. The clerk had her sit down and felt of her foot as gravely as a physician examining an obstetrical case. By the time he had finished with her, this woman, who had listened patiently, though impatient at the crowd that came gradually around them, reached for her old shoe.

"Have I all that wrong with my feet," she asked.

The clerk said, "You certainly have."

"Are you sure?"

"Positively."

"Then this," said the doctor's wife, "this is no place for me. I belong in an orthopedic clinic and there I'm going as fast as a cab can take me."

She went away like a shot, leaving the clerk dumbfounded and the crowd agape. At her husband's office she told her tale of woe.

"Get your shoes big enough and you can walk," he said.

But that wasn't all. She had her feet X-rayed and examined. She did not have any of the things wrong that the clerk had said she did but she would have had a good chance of getting them if she had followed his advice.

Here is one instance where the woman won. But that section of that store does a land-office business. There were suffering suckers all around buying those supports — fat, thin, old, young—all the same style of corrective. Boy, page Peruna and Lydia P.!

A short wide foot needs a short wide shoe. A long narrow foot needs a long narrow shoe. Yet only this week the writer sat beside a woman with a foot almost exactly square who was trying to force that foot into a shoe that was built like a ruler because the clerk had been told to "fit 'em long and narrow." A too-short shoe will cause bunions, crumpled and hammer toes and hallux valgus, spreading of the metatarsal shafts, anterior metatarsalgia, flat feet, shortened tendo Achilles and hundreds of other similar troubles to say nothing of defects of hips, knees, ankles and not the least of all of disposition and nervous reflexes. Fit the foot, not the idea should be the rule.

A freak shoe is a crime. Shoes with an inwardly twisted foot,—that is with the front of the shoe swung inward from the longitudinal axis of the body is a freak. The foot swings straight forward and it must be remembered that the shoe is a housing for the foot.

The midtarsal and tarso metatarsal joints are not capable of any great extension of motion but are simply shock absorbers. Shod in a shoe without a shank, this portion of a foot comes down under a load and meets a surface from which it drops away as there is nothing upon which the mid-foot may rest. If there is no heel as in a tennis shoe, moccasin or sneaker, the ground furnishes this surface. A foot does not need to be held up but it must have a surface upon which it can rest. A stout steel shank is a requisite for a bootheel and it must reach from the front of the heel forward to where the tread rests upon the floor.

ALUMNI, CLASS AND FRATERNITY BANQUETS

Those wishing to arrange for dinners at the Champaign-Urbana Meeting May 18 to 21, 1926, should get in touch with the Committee on Arrangements, Dr. Earl D. Wise, Chairman, at Champaign, so that definite arrangements can be made as early as possible. The program is well filled up for the meeting, but special arrangements can be made for banquets to be held Wednesday noon, or Wednesday evening.

SHALL WE HAVE A FEDERAL DEPARTMENT OF EDUCATION? IF YOU GIVE THE BUREAUCRATS THE CHILDREN, YOU MIGHT JUST AS WELL GIVE THEM EVERYTHING ELSE*

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PRINCETON, N. J.

I may say, if you will pardon a personal word, that the Chairman is incorrect in connecting me with Princeton University. As a matter of fact, I am connected with an institution which by some persons in certain fields is regarded as an opponent of liberty. But the charge is really very strange. I come, indeed, of a very strict sect, in company with my colleagues in the faculty of Princeton Theological Seminary; but I come of a sect that has always been devoted to the great principles of liberty. And to my mind one of the fundamental principles of liberty, which is involved in the present issue, is the principle of the right of voluntary association, the right of persons to associate themselves voluntarily for the propagation of their own views, however erroneous they may be thought to be by others, in the field of religion or in other spheres. You will find, I think, if you investigate the matter, that it is this principle of voluntary association which, strangely enough is being attacked by some persons in the name of liberty.

People seem to have a notion that a voluntary organization, religious or otherwise, is not free to exclude from the body of its official representatives those who hold principles which are diametrically opposed to its own. But as a matter of fact the principle of voluntary association, with maintenance of the purpose for which a voluntary association is formed, is at the very roots of human liberty.

But with that right of voluntary association goes insistence upon the most complete tolerance on the part of the State (which is an involuntary association) over against all other bodies, religious or social or whatever they may be, no matter how deleterous to the common welfare some men may think that they are.

It is time to come to the special subject upon which I have been asked to speak. Shall we have a Federal Department of Education?

One bill (S. 291—H. R. 5000) has been introduced in the present Congress which looks directly to the establishment of such a department. Another bill (H. R. 4097) not only provides for the establishment of such a department, but also provides in very radical form for the principle of Federal aid to the States, laying down even very definite conditions on which that aid may be received.

Another bill (S. 1334) has been introduced, and various proposals, as you know, have been made, looking to the reorganization of the federal departments. What the ultimate relationship between these measures and the establishment of a federal department will be, we cannot now tell; but I think that it is clear that just at the present juncture, in view of the very widespread support which the proposal has received, the question of a federal department of education is very decidedly before the country.

Do we want a Federal Department of Education, or do we not? I think we do not. And I am asking your permission to tell you very briefly why.

We do not, I think, want a Federal Department of Education because such a department is in the interests of a principle of uniformity or standardization in education which, if put into practice, would be the very worst calamity into which this country could fall.

This measure cannot be understood unless it be viewed in connection with related measures, like the so-called Child Labor Amendment; or like the Sterling-Reed bill with its predecessors and its successor, which provided for Federal aid to the States and which really would have taken away what measure of States' rights we possess.

People think very loosely in these days about receiving gifts. But on the basis of some observation of the reception of gifts in the educational field, I think I may give it as my opinion that a gift, in the educational field, always has a string tied to it. That may be observed with reference to various educational foundations. They provide ostensibly, sometimes, that the liberty of the institution to which they appropriate their funds is to be maintained. But in a very few years you will find that such institutions have become completely subservient to an outside board of control. And how much more

*Address before the Sentinels of the Republic, at Washington, D. C., Jan. 12, 1926.

obviously is that the case when we are dealing with the Federal Government, an agency which in every possible way is encroaching upon the power of the States. Federal aid in education inevitably means federal control.

But the same result will be accomplished even by the measure that we now have directly in view. The establishment of a Federal Department of Education would be a step, and a decisive step, in exactly the same direction as those measures of which we have just been speaking.

We are indeed, sometimes actually asked to believe that a Federal Department of Education is a very innocent thing, that when it is established it will not do anything, and will not ask for any funds, except funds that are already provided for various Federal agencies. But in this company I need not say that such modesty on the part of Federal departments is hardly in accordance with precedent. As a matter of fact it seems to be the fixed habit of every Federal bureau to ask for all the funds that it can get. I think that we may lay it down as a general principle that the more these bureaus get the more they want. And if we have a full-fledged Department of Education, with a Secretary at a salary of $15,000, and with hosts of other officers below that, we shall have a great Federal agency which is certain to embrace a larger and larger number of activities. And we shall have taken the really decisive step towards centralized control. It will be an extremely difficult, if not an absolutely impossible, thing to keep a Federal Department of Education as a merely paper affair and to prevent it from so extending its activities as to secure exactly the same results in the long run as the results that were aimed at by the so-called Child Labor Amendment and by the Sterling-Reed Bill.

It is clear, therefore, that if we want to defeat this tendency in the educational field, now is the time to do it.

The reason why I am opposed to this proposal is that it represents a very ancient principle in the field of education, which, it seems to me, has been one of the chief enemies of human liberty for several thousand years — the p r i n c i p l e, namely, that education is an affair essentially of the State, that education must be standardized for the welfare of the whole people and put under the control of government, that personal idiosyncrasies should be avoided. This principle, of course, was enunciated in classic form in ancient Greece. It is the theory, for example, that underlies the *Republic* of Plato. But the principle was not only enunciated in theory; it was also, in some of the Greek states, put into practice. It is a very ancient thing—this notion that the children belong to the State, that their education must be provided for by the State in a way that makes for the State's welfare. But that principle, I think you will find if you examine human history, is inimical at every step to liberty; and if there is any principle that is contrary to the whole genius of the Anglo-Saxon idea in government, it seems to me that it is this principle of thoroughgoing State control in education.

Of course, we have a great many prophets of it today. I suppose it is the basic idea of Mr. H. C. Wells, in his popular *Outline of History*. The solution of the problem of the state, Mr. Wells believes, is in education; and by undertaking this problem in a more efficient way, possible because of increased ease of communication, the modern state can accomplish what the Roman Empire failed to accomplish.

I am willing to admit that in some fields standardization is an admirable thing. For example, standardization is an admirable thing in the making of Ford cars. But just because it is an admirable thing in the making of Ford cars it is a very harmful thing, I think, in the case of human beings. The reason is that a Ford car is a machine and a human being is a person. There are, indeed, a great many men in the modern world who deny the distinction. At this point we have an illustration of the utter falsity of the popular notion that philosophy has no practical effect upon the lives of the people, that it does not make any difference what a man believes in the sphere of ultimate reality. For the whole tendency that we are fighting today has underlying it a rather definite theory. Ultimately underlying it, I suppose, is the theory of the behaviorists—that the human race has at last found itself out, that it has succeeded in getting behind the scenes, that it has pulled off from human nature those tawdry trappings in which the actors formerly moved upon the human stage, that we have discovered that poetry and art and moral responsibility and freedom are delusions and that mechanism rules all. It is a mistake, we are told, to blame the criminal; the

criminal is exactly what he is obliged to be, and good people are obliged to be exactly what they are. In other words, liberty is a delusion and human beings are just somewhat complicated machines.

It is probably not a thing which has come into the consciousness of very many people, but it is a fact all the same, that present-day education to a very large extent is dominated by exactly this theory, in one form or another. It is dominated partly by persons who hold the theory consciously; but it is dominated a great deal more by persons who have not the slightest notion what the ultimate source of their ideas in the field of education really is or what the result of them will be, but who are putting them into practice all the time.

What is the result of the application of this mechanistic theory in the sphere of education? I have no hesitation for my part in saying that the result is most lamentable. The result is simply intellectual as well as moral decline. It is obvious, I think, that there has been a moral decline; but what is not always observed is that there is also today a most astonishing and most lamentable intellectual decline. Poetry is silent; art is imitative or else bizarre; and if you examine the products of present-day education you will have to search far before you find a really well-stocked mind. I am not unaware, indeed, of the advantages of modern education; I am not unaware of the fact that a larger number of persons can read and write than formerly was the case. But despite all that I am still obliged to bring against the educational tendency of the present day in the sphere of public education the charge that the product is lamentably faulty. We are told, you know, that the old-fashioned notion of really learning things is out of date. Some time ago I heard one educator, a rather well-known man, tell a company of college professors that it is a great mistake to think that the business of the college professor is to teach the student anything; the real business of the college professor, he said, is to give the students an opportunity to learn; and what the student is in college to do is to "unify his world."

I am afraid that the students make a poor business of unifying their world—for the simple reason that they have no world to unify. They have not acquired a large enough number of facts even to practice the mental business of putting facts together; they are really being starved for want of facts. There has been an absurdly exaggerated emphasis on methodology at the expense of content in education; and the methodology that is actually advocated is based upon the false and vicious theory to which I have just referred—a false and vicious theory that destroys all the higher elements in human life.

With the persons who advocate this theory I cannot bring myself to agree. Somehow I cannot believe that the higher things in human life are delusions and that only the lower things are real. And therefore I do believe in freedom, and I do believe that persons are different from Ford cars.

What you want in a Ford car is just as little individuality as you can get. Sometimes, indeed —I may say that on the basis of my experience with a Ford car—sometimes you get entirely too much individuality. I soon learned by my own experience, before the days of self-starters, that sometimes a Ford will start and sometimes it won't, and that if it won't there is no use whatever in giving it any spiritual advice. Sometimes, in spite of what Mr. Ford can do, there has been an undue amount of individuality in the Ford car. But the *aim* of the whole activity at any rate, whatever the result may be, is to produce a thing that shall have just as little individuality as possible; the aim is that every Ford car shall be just as much like every other Ford car as it can possibly be made.

The aim of education, on the other hand, dealing, as education does, with human beings, is exactly the opposite; the aim of education is not to conform human beings to some fixed standard, but to preserve individuality, to keep human beings as much unlike one another in certain spheres as they possibly can be.

But that great aim of education, that personal, free, truly human aspect of education, can never have justice done to it under federal control. And that is the reason why the standardization of education that has already been carried on through the Federal Bureaus is deleterious. I have observed this in general: that when people talk about uniformity in education what they are really producing is not something that is uniformly high, but something that is uniformly low; they are producing a kind of education which reduces all to a dead level, which fails to understand the man who loves the

high things that most of his fellowmen do not love. This degrading tendency is furthered I fear, by the present federal activities in education, and it will be given a stupendous impetus if this federal department is formed.

Just at this point, however, there may be an objection. I have been arguing, some men will tell me, against control of education by the State. But, it will be said, we already have control of education by the State, namely by the instrumentality of the individual States of our Union; and so—thus the objection runs—the authority of a Federal Department would not differ in principle from the authority which the State Governments already possess. I have been talking about individuality; I have said something about the rights of individual parents, by implication at least. "Well now," it will be said, "are not those rights already subject to the control of the Individual States. But if they are, is not all that is being accomplished by this Federal measure merely the transference of this authority already possessed by Government to an agency that can exercise it in a wiser and more efficient way? Does not the principle, then, remain exactly the same?"

With regard to this objection, I am perfectly willing to admit that the State Governments have, in the sphere of education, in recent years committed some very terrible sins. We need think only, for example, of the Oregon School Law, which sought to take children forcibly from their parents and place them under the despotic control of whatever superintendent of education happened to be in power in the district where the residence of the parents was found. Or we need only refer to the Nebraska Language Law (similar laws being enacted in a number of other States), which provided that no language other than English should be taught in any school, public or private, up to a certain grade—in point of fact until the children were too old ever to learn languages well. That was a law which actually made literary education a crime. Or we may think of that one of the two Lusk laws in the State of New York which provided that every teacher in all classes, public and private, formal and informal, should take out a State license and become subject to state visitation and control. These laws were blows, it seems to me, against the very vitals of liberty.

But the fate of all these measures is illustrative of the safeguards which we shall have if we keep this important concern of education under the control of the individual states. The Lusk laws were repealed. The Oregon school law and the Nebraska law fell before that last bulwark of our liberty, the United States Supreme Court. As Justice McReynolds said in the great decision in the Oregon school case, the child, in America, is not the mere creature of the state—a great principle which I think includes all that we are here endeavoring to maintain.

So it is to be observed that State measures—partly for reasons that have been brought out in what the previous speaker has said regarding the difficulty of securing a review of Congressional actions, and partly for other reasons—are very much more likely to be checked, if they are oppressive and against the spirit of our institutions, than are Federal measures.

Furthermore, there is a great safeguard in numbers. The beneficent fact is that there are forty-eight States in the Union. Some of them may become very bad in the sphere of education; but it is perhaps not likely that all of them will become utterly bad. Thus there is a great safeguard in the mutiplicity of the States. For various reasons, then, I maintain that the principle is *not* the same when education is put under federal control as when it is placed under state control.

Personally, indeed, I am opposed to certain tendencies in the sphere of public education in the states; I am opposed to the tendency by which the public school is made to do things that parents ought to do, such as providing moral instruction and the like. I am opposed to "morality codes" in the public schools. I have examined some of them and I think that they are vicious. They are not only faulty in detail, but they are wrong in principle. They base morality upon experience, instead of upon an absolute distinction between right and wrong. Despite the good motives of their compilers, therefore, they undermine the sense which children (and all the rest of us) ought to have of the majesty of the moral law.

That is, indeed, only a matter of personal opinion. I do not know whether it comes under the principles for which the Sentinels of the Republic stand. But you can take it for what it is worth. I, for my part, think that the func-

tions of the public school ought to be diminished rather than broadened; and I believe that the public school ought to pay just a little bit of attention, perhaps, to that limited but not unimportant function which it is now almost wholly neglecting—namely, the impartation of knowledge.

Thus there are criticisms which I might make with regard to public education in the individual States. But those criticisms do not fall directly under the subject with which we are dealing here, and I am not sure whether I can claim for them the authority of the Sentinels of the Republic. In these matters, I am giving voice to my own personal opinion. But perhaps I have said enough to show at least that as citizens we have important questions to decide when we are dealing with public education in the individual States.

At any rate, in the light of what I have just said, I do maintain that the danger is very much greater when education is placed under the control of the Federal Government, than the danger which undoubtedly does prevail even now on account of a mistaken use of State authority. Federal control of education, despite what is often said, most emphatically is not the same in principle as control by the States. And so I believe that this measure which would establish a Federal Department of education ought to be defeated.

But I think that a great deal more than that ought to be done. I think that not only this particular measure ought to be defeated but the whole tendency that is represented by this measure ought to be defeated, the tendency towards a centralized standardization in education.

At this point, it is true, some persons hold up their hands in horror. "Do you mean to say," they ask us, "that we are actually going to continue to turn this important matter over to forty-eight separate and distinct states, to say nothing of the idiosyncrasies of individual parents, who want to send their children to all sorts of peculiar private schools and church schools? What utter confusion we shall have if we permit this sort of thing! Why, if we have this unlimited freedom of private schools and so on, we shall make a perfect mess of it."

Well, with regard to that, I may say that I think it is a good deal better to have confusion than it is to have death. For my part, I believe that in the sphere of education there ought to be the most unlimited competition — competition between one state and another and competition between state school and private schools.

"But," it is said, "do you not believe in equal opportunity? Surely the Federal Government ought to help the States so that there will be equal opportunities for all the children in the whole country."

Now I am bound to say quite frankly, with regard to this matter of equal opportunity, that I am dead opposed to it. What ought you to do to a State that does not provide opportunities for its children equal to the opportunities that are provided by some other States? Ought you to tell the people of that State that it does not make any difference, because if they do not do the thing somebody else will do it for them? I think not. There ought to be unlimited competition in the sphere of education between one State and another State and between State schools and private schools. The State schools ought to be faced at every moment by the health-giving possibility of competition on the part of private schools and church schools. Only that will keep State education in a healthy way.

Of course, I understand perfectly well that competition in certain spheres has its disadvantages; and I am not going to talk about that. In some spheres it may have to be checked—we are not discussing that difficult question here. But when it comes to the sphere of the mind, I believe in absolutely unlimited competition. Anything else than that, it seems to me, will cause stagnation and death.

"But," people say, "how about efficiency?" Well, I think, if the truth must be known, that that word "efficiency" is one of the most misused words in the language. Many persons seem to suppose that the mere use of that word constitutes an argument; they seem to suppose that you ought to regard it as a sufficient argument in favor of anything whatever when that thing is said to be efficient.

I notice also another word that is used in a somewhat similar way. It is the word "sincere." It often seems to be supposed that it is an argument in favor of a person who disagrees with us, when the fact is established that "he is perfectly sincere." It seems to be supposed that the fact that he is sincere constitutes a reason why I ought to agree with the person in question.

But how absurd that is! As a matter of fact, the more sincere a man is in his advocacy of a thing that is wrong, the more opposed to him I am—not the more opposed to him in my estimate of his moral character (I may respect him personally because he is sincere), but the more opposed to the measures that he advocates. The more sincere he is in favor of something that I regard as bad, the more dangerous he is likely to be.

It is somewhat the same with regard to this matter of efficiency. Some men seem to think that it is admirable for its own sake. But surely efficiency involves doing something, and our attitude toward the efficiency all depends on whether the thing is being done is good or bad.

A man does not admire efficiency very much when the efficiency is working to his disadvantage. You have all probably heard the story about the tramp that got up to the fourth floor of the department store. The floorwalker on the fourth floor kicked him down to the third floor; and there he fell foul of the floorwalker on the third floor, who kicked him down to the second floor; and then the floorwalker on the second kicked him to the ground floor; and then the floorwalker on the ground floor kicked him outside. He landed on his back outside, and when he got up he remarked in great admiration: "My, what a system!"

I am unable to attain quite that measure of complete detachment that was attained by that tramp. Men want us to be overcome by admiration for a system that is working us harm. For my part, I flatly refuse. I am reminded of what Dr. Fabian Franklin said some years ago in an article in the *Yale Review*. Some persons, he said in effect, think that an objection to socialism is that it would not work. But so far as he was concerned, he said, his objection was rather that it might possibly work.

So it is with this Federal control of education. The better it works the worse it suits me; and if these people had their way—if everything could be reduced to a dead level, if everybody could be made like everybody else, if everybody came to agree with everybody else because nobody would be doing any thinking at all for himself, if all could be reduced to this harmony—do you think that the world would be a good place under those circumstances? No, my friends. It would be a drab, miserable world, with creature comforts in it and nothing else, with men reduced to the level of the beasts, with all the higher elements of human life destroyed.

Thus I am in favor of efficiency if it is directed to a good end; but I am not in favor of efficiency if it is directed to something that is bad.

As a matter of fact, Federal Departments are not efficient, but probably the most inefficient things on the face of this planet. But if they were the most efficient agencies that history has ever seen, I should, in this field of education, be dead opposed to them. Efficiency in a good cause is good; but I am opposed to Federal efficiency in this sphere because the result of it is a thing that I regard as bad—namely, slavery. And I am not inclined to do what a great many people do today; I am not inclined to write freedom in quotation marks as though it were a sort of joke. I believe, on the contrary, that it is something that is very real. An ounce of freedom is worth a pound of efficiency. I think, too, that we may discern within the last year just the beginning of the rise of the love of liberty again in our people. I hope therefore that this measure may be defeated, and that all measures may be defeated that look in the same direction, and that we may return to the principle of freedom for individual parents in the education of their children in accordance with their conscience, and to the principle of freedom for the States, and to the reliance upon the multiplicity of them for a preservation of those things that have made our Country great.

It is to be hoped that the indications of a returning love of liberty which are just beginning to appear are not illusory, but that America, despite opposition, is going to return to the freedom that used to be the very atmosphere that she breathed. But let us be perfectly clear about one thing—if liberty is not maintained with regard to education, there is no use trying to maintain it in any other sphere. If you give the bureaucrats the children, you might just as well give them everything else. That is the reason why I think that every one of us ought to be opposed with all his might and main to the sinister legislative measure that we have been considering today. No, we do *not* want a Federal Department of Education; and we do not want, in

any form whatever, the slavery that a Federal Department of Education would bring.—*The Woman Patriot,* Feb. 15, 1926.

THE MENDELIAN LAW. ITS APPLICATION TO THE HUMAN FAMILY

We are repeatedly asked for information relative to the Mendelian law as it applies to the human family. In order to get the information to the widest number of our readers possible we reproduce an article in the *Journal of the Iowa State Medical Society,* March, 1926, from the pen of Dr. W. W. Bowen of Fort Dodge.

Gregor Johann Mendel

In 1900 the law of Mendel was rediscovered. At first it appeared to refute and overthrow the idea of evolution, but as it became better understood and its principles thoroughly investigated it is found to confirm evolution, and is the basis of all biologic studies. What the atomic theory is to chemistry, and the theory of gravitation is to astronomy, Mendel's law is to biology.

In 1822 Gregor Johann Mendel was born in Heinzendorf, a small village in Austrian Silicia. He was one of a large family and his father was a peasant, a tenant farmer as we would say in this country, having but recently risen to that station from a peasant laborer. Mendel was not a Jew though the name suggests Jewish origin. There was no public school in Heinzendorf, but Mendel's maternal uncle supported a school there which Mendel attended, and at the age of eleven he was sent to the public school at Leipnic and finished there. The gymnasium in Germany and Austria corresponds to our high school, but is not free. Mendel's father was unable to send him to the gymnasium and do justice to his other children, but a younger sister gave up a part of her dowry that the money might be had. Now a dowry in those European countries means more than it does here, for here a girl can generally find a husband whether she has a dowry or not, but there the dowry is part of it and if a girl has none, she is pretty certain not to find any one to marry her. Mendel took the dowry, but later repaid his sister and educated two of her sons. He went to the gymnasium at Tropou and at Ölmutz, finished there. At Tropou, one of his teachers was an Augustinian Monk who made a great impression on him and when he was through at Ölmutz, he entered the monastery at Brünn, known as Konigklöster, as a novice and at that time assumed the name Gregor. He was then twenty-one and was ordained a priest at the age of twenty-five, and then taught four years in Brünn; then at the age of twenty-nine he was sent by the monastery to Vienna to study natural science to which he had shown great aptitude. He stayed two years and returned to Brünn and taught in the Real schule for fifteen years. Then at the age of forty-six he was made abbot. This elevation came to him against his wishes. He was an enthusiastic scientist and teacher, and even when he was a novice, he commenced his original investigations in botany, and his elevation brought all this to an abrupt close, and henceforth his life was spent in executive duties, not to his liking.

Shortly after Mendel became abbot, the Austrian government made a law taxing monasteries, as they thought unjustly, and they resisted the law and Mendel led the fight. At first all the other monasteries supported him, but at the last he stood out alone and even allowed the property of the monastery to be distrained rather than submit. After years the law was repealed, but not until after Mendel had died of chronic nephritis from which he had suffered for years.

If ever a man suffered the troublous vicissitudes of life to the end, it was Mendel. In his young life he was industrious, original, enthusiastic and of a joyous disposition. For twenty-five years he spent his spare time in the garden of the cloister studying and raising plants, and eight years were devoted to different varieties of peas, and he kept records of over 8,000 plants and from them evolved the principles now known as Mendel's law. He published this in 1865-6, years after the publication of the "Origin of Species" by Darwin, in the transactions of the Historical Society of Brünn, and it fell completely flat. He sent this account to Nageli in Munich, the only great scientist with whom he had direct contact, but Nageli considered it of little moment. He was then forty-three, and after that he published one short article and that was all. Three years later he was made abbot, and shortly afterward the trouble with the government commenced, and he became ill, and troubled and morose, and his naturally joyous disposition changed, and became suspicious and embittered and he died an unrecognized and disappointed man. He never knew that the government finally decided his differences in his favor, and he never knew that eighteen years after his death and thirty-five years after his paper was published, that it was resurrected and has now become the fundamental law of inheritance and the basis of a new science, eugenics.

In 1900 three scientists all working independent of each other, De Vries, a Dutchman; Correns, a German, and Tsermack, an Austrian, all worked out the same principles and dug up Mendel's paper hidden in the dust of the transactions of the Brünn Historical Society and gave his great work to the world.

Mendel's Law

Mendel made his experiments with the edible garden pea, not sweet peas as is sometimes stated. He selected seven characters which were easily perceived and crossd them with each other. They were:

1. Difference in the form of the ripe seed.
2. Difference in the color of the seed albumin.
3. Difference in the color of the seed coat.
4. Difference in the form of the ripe pods.
5. Difference in the color of the unripe pods.

6. Difference in the position of the flowers—axillary or terminal.

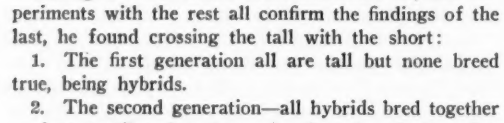
7. Difference in the length of the stems, the tall were about 6 feet, the short about 18 inches.

Taking the last which illustrates them all, and experiments with the rest all confirm the findings of the last, he found crossing the tall with the short:

1. The first generation all are tall but none breed true, being hybrids.

2. The second generation—all hybrids bred together—gives 3 tall and 1 short, the short breeds true, but only one of the tall breeds true.

3. Shorts bred together always give short.



All subsequent families breed like F2.

There are certain terms that must be understood in order to comprehend the Mendelian law:

Dominant, a character that dominates or controls an individual.

Recessive, a character that tends to recede and is overshadowed by the dominant when both are present in an individual.

Heterozygous, containing 2 gametes, one dominant, the other recessive and that does not breed true.

Homozygous, containing 2 gametes, both alike and that does breed true.

Gamete, something inherited from progenitors, each life cell contains 2 gametes, one inherited from the father and one from the mother.

In order to understand the zygous terms it is necessary to have a conception of the zygote. Each life cell, the spermatozoid in the male and the ovum in the female, contains two hereditary elements, one from the father and one from the mother, these are called gametes. Each gamete is either dominant or recessive.

To illustrate this graphically:

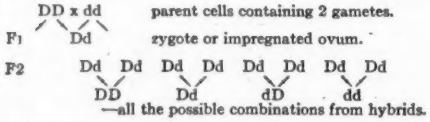
Let D represent dominant.

Let d represent recessive.

Then DD will be homozygous and will breed true.

Dd will be heterozygous and will not breed true.

dd will be homozygous and will breed true.



Ratio 1 : 2 : 1.

Now in tall and short peas, tall is dominant to short. Therefore—

Tall is dominant.

TT is dominant also homozygous and breeds true.

tt is recessive and also homozygous and breeds true.

Tt is dominant in appearance but is heterozygous and does not breed true.

Then from the diagram we get—

1. Dominant bred to dominant, all dominant and all breed true.

2. Recessive bred to recessive, all recessive and all breed true.

3. Dominant bred to recessive, all are dominant in appearance, but none breed true.

4. Dominant bred to heterozygous, 2 dominants that breed true, 2 heterozygous, that look dominant.

5. Recessive bred to heterozygous, 2 recessive that bred true, 2 heterozygous that look dominant.

Mendel found that his law applies to peas and assumed that it applied also to other plants as well; De Vries found that it applies to wheat, and others found that it applies to all plants. Prof. Morgan of Columbia University proved that it applies to the banana fly and discovered numerous of its complications, and in working this out, cultivated, recorded and tabulated over 40,000 of these flies. The banama fly lends itself very well to experimentation because it has a number of variations, it is easily kept on a little banana in a milk bottle, and reproduces every nine to eleven days 200 to 300 young.

It is now known that Mendel's law applies to all animals and to the human species, and that every inheritable character follows this law; that it not only controls physical form, color complexion, family peculiarities, like the Hapsburg lip, but mental traits and moral character and family habits are also governed by it. In short it is the basis of eugenics and the basis upon which every breeder must depend to develop his herd, and every horticulturist to develop new flowers and plants. It is the most fundamental thing in biology.

INHERITABLE CHARACTERS

Dominant	Recessive
Normal size of body	True dwarfism
Short fingers and thumbs	Normal length
Brachydactylism	Normal digits
Extra finger (polydactylism)	Normal number
Webbed fingers	Normal fingers
Fragile bones	Normal bones
Double jointedness	Normal joints
Hapsburg lip	Normal lip
Pale thick skin	Dark thin skin
Normal skin pigment	Albino
Spotted white hair	Solid color
Easily blistered skin	Normal skin
Hairy skin	Normal skin
White fore lock	Solid color
Dark brown hair	Light brown hair
Black hair	All other colors
Patchy gray hair	Solid color
Curly hair	Straight hair
Hair on fingers	Absence
Dark eyes	Blue eyes
Hereditary cataract	Normal eyes
Large eye ball	Normal
Normal	Deaf mutism—when not due to disease
Non-musical	Musical
Non-artistic	Artistic
Normal condition	St. Vitus dance
Normal mentality	Dementia precox
Normal condition	Paranoia
Normal condition	Alcoholism
Normal condition	Hysteria
Diabetes	Normal condition
Normal condition	Bronchial asthma

It is not necessary for me to cite the histories of families, large portions of whose members are insane or feebleminded, and of others who are nearly all

criminal and others who are hereditary paupers. Every community has them—they are hereditary traits. Cultivation and education seems to benefit them some, but does not eradicate them.

The Cells of the Body

The body of an animal or plant is composed of an innumerable number of cells. The simplest animal or plant is composed of a single cell and that cell contains all the functions of life, digestion, absorption, secretion, excretion, sensation and reproduction; in the more highly organized plants and animals, the functions of the cells become specialized, thus there are muscle cells for motion, nerve cells for sensation, glandular cells for secretion, etc. All these cells we may call body cells and they have the power to reproduce cells like themselves, but they can not reproduce the individual, for this highly specialized cells are segregated from the body by organs for that very purpose. These are the germ plasm or life cells or reproduction cells, the spermatozoid in the male and the ovum in the female.

Chromosomes

In unicellular organisms, reproduction is by simple division of the cell into two, but in higher organisms, growth is by mitosis and reproduction is by union of the germ cells of two individuals of different sex and then division into body cells.

Mitosis is cell division of a more complicated sort. Each cell contains a nucleus and near the nucleus is a tiny spot called the centrosome. When mitosis begins, the centrosome separates into two and they recede from each other, and as they recede a bundle of fibres appear between them called the achromatic spindle. They finally reach points on opposite sides of the nucleus, and the achromatic spindle broke in two, but in this new position a spindle connects them through the nucleus. As this is going on, the chromosomes have fused into one irregular thread and then divides into the same number of chromosomes that there were before and now they arrange themselves in v-form with the points of the v's toward the center of the nucleus like the spokes of the wheel, with the achromatic spindle as a hub. The chromosomes now split longitudinally and separate from each other so that where there was one wheel, there are now two, and then the whole cell divides betwen them, and mitosis is complete. This is the process of division in all body cells.

The division of the life cells or sperm cell is slightly different. When the chromosomes form into a simple thread and fills the nucleus as an irregular coil, the thread divides again, but only into half the number of chromosomes there were before, then mitosis proceeds about the same as in the body cells. When the sperm cell unites with its mate, that is, when impregnation occurs, a like number of chromosomes is brought into the new cell from the mate and the number of chromosomes is restored.

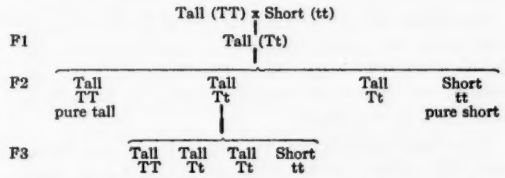
There is a definite number of chromosomes in each species, thus man has 24—this is pretty definitely determined though there is some difference in opinion about it, some claim that there are 16. The mouse has 20; the snail, 32; cotton, 28; 4 o'clock, 16; garden peas, 7; night shade, 36; tobacco, 24; wheat, 8.

The chromosomes are gene carriers; gene are those properties of cell that permit or cause any inheritable character to pass from parent to offspring, they are also called factors, thus there is a factor for the dark color of the hair, another for the dark skin, another for the color of the eyes, another for tallness, and so forth, one for every inheritable character. Each chromosome contains numerous factors and may be likened to a string of beads—each bead the factor for some character.

The factors for similar characters are located in the same chromosome, and the closer the characters resemble each other, the closer their factors lie together in the chromosome, and are called linked factors. For some characters to show up in the offspring two or more similar factors are required.

When a factor exists in one parent for some character, a similar factor exists in the other parent and they are called allelomorphs of each other, for instance, in the tall pea, there is a factor for tallness, and in the short pea, there is an absence of the factor for tallness or a factor for shortness, and the factor for tallness and shortness are allelomorphs of each other.

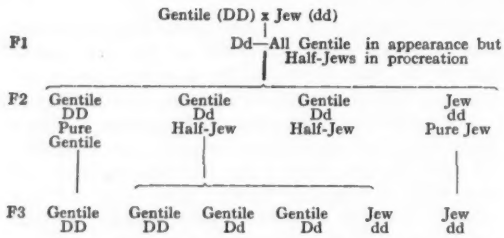
When the tall pea is crossed with the short, the germ cell or gamete of the tall contains two elements for tallness which is inherited from its two parents, and the germ cell of the short contains two elements of shortness which is inherited from its parents; but when the two gametes unite with each other and form the fertilized ovum or zygote, only one element comes from the tall and one from the short, so the first generation genetically are all hybrids even though they may look tall. In the second generation they separate into pure tall, pure short and heterozygous and this is called segregation.



One of the chromosomes is the sex chromosome and in it linked together are not only the factors that determine the difference in the sex organs, but also the factors that determine the bodily character peculiar to sex, such as size of the body, configuration of the body, the beard, the difference in the larynx and consequent difference in the voice, the difference in the breasts, etc.

Simple Mendelian Law

A Jewish scientist, Salaman, worked out the Mendelian law as related to Jews and non-Jews and found that they cross according to simple Mendelian law. the gentile or non-Jew being dominant and the Jew recessive.



1. Gentile marries a Jew all their children look like gentiles but are half Jew.

2. If a half-Jew marries a half-Jew, 3 children out of four will look like gentiles but only one of the three will be a real gentile and his progeny will be gentiles, the other two will be half Jews; the other one of the four will be a real Jew. Ratio 3 : 1 as to looks. Ratio 2 : 1 as to breeding.

3. If one of these segregated gentiles marries another segregated gentile, all their children will be real gentiles.

4. If one of these segregated Jews marries another segregated Jew all their children will be real Jews.

5. If a gentile marries a half-Jew, all their children will look like gentiles, and two will be real gentiles, while the other two will be half-Jews. Ratio 4 : 0 as to looks. Ratio 2 : 2 as to breeding.

6. If a Jew marries a half-Jew, half their children will look like gentiles, but 2 will be half-Jews while the other half will be pure Jews. Ratio 2 : 2 as to looks. Ratio 2 : 2 as to breeding.

While this is the law worked out by Salaman, I am sure it is correct as to breeding, but I believe there will be more variation as to looks than his law shows, because dominance is not always complete, and frequently the ratio of dominance or appearance conforms very closely to the ratio as to breeding. This is true in the dehorning of Hereford cattle.

Dihybridism

Sometimes there are two factors in a chromosome that carry the same character, as for instance color. In those cases to bring out certain features in the offspring, two doses are required. This is beautifully illustrated in the negro.

It is fairly certain that the original man was brown and not yellow, white, black or red and that these colors have been added to him through the ages by mutation.

If a white person is crossed with a negro, all the children are mulattoes—none are white and none are black, but all are brown.

If mulattoes are crossed with each other, the children will be of varying shades of brown, and rarely one will be pure white and equally rarely one will be genuine Ethiopian black.

If the Ethiopian color were a simple Mendelian character, all of the children of negroes crossed with white would be black as black is dominant, but none of them are black. This is because it requires two doses of black to produce the Ethiopian black, therefore a careful study of mulattoes shows that the children of two mulattoes have:

1. One chance in sixteen of being black.
2. One chance in sixteen of being white.
3. One chance in four of being dark brown.
4. One chance in four of being light brown.
5. One chance in six of being mulatto.

This is illustrated in the appended table.

AB	Ab	aB	ab
AB	AB	AB	AB
AB	Ab	aB	ab
Ab	Ab	Ab	Ab
AB	Ab	aB	ab
aB	aB	aB	aB
AB	Ab	aB	ab
ab	ab	ab	ab

These 16 squares represent all the possible combinations of the two factors working together. Ratio 1:4:6:4:1.

Although one out of sixteen is white, one must not get the impression that he will be a Caucasian, he will not be nor will he even look like one, because there are numerous other characters of the negro race such as kinky hair, thick lips, flat nose, physical contour, flat feet and protruding heels, and all of them are dominant and will show up to be a negro in spite of his color.

Compound Characters

Cock's Combs

Ordinary barnyard fowls have four types of combs:

1. Single—common to various breed and is always recessive, and is probably the original form of the comb.

2. Pea comb—common to various breeds, and dominant to single.

3. Rose comb—common to various breeds, and dominant to single.

4. Walnut comb—found normally only in one breed, the Malay.

In the various crosses peculiar things appear.

Single x pea follows the simple Mendelian law:
F_1 all are pea but do not breed true.
F_2 3 pea : 1 single—ratio 3 : 1 as to looks.
1 : 2 : 1 single as to breeding.
Single x rose also follows the simple Mendelian law:
F_1 all are rose but none breed true.
F_2 3 rose : 1 single as to looks.
1 : 2 : 1 as to breeding.
Rose x pea an entirely unexpected thing happens:
F_1 all are walnut.
F_2 walnut x walnut gives 1 walnut : 1 rose : 1 pea : 1 single.
F_3 these 4 types breed true.

It is probable that the original comb was single, but by mutation the pea appeared, then it became segregated and became the prevailing comb of several breeds.

At another time by mutation, the rose comb appeared and became segregated and is finally the prevailing comb of various breeds.

At another time the rose became crossed with the pea and the walnut, being the heterozygous form of pea and rose, became segregated and eventually the Malay breed was developed with the walnut as its peculiar comb.

Sex

The production of sex follows the Mendelian law, but naturally there is a modification of the usual Mendelian ratios—1 : 2 : 1 as to breeding, and 3 : 1 as to appearance.

It is axiomatic that the offspring of any two parents must not be halfway products but must be either male or female. In bysexual animals hermaphrodites never

exist; all so-called hermaphrodites prove on careful investigation to be errors in development like hare lip, usually hypospadias.

The sex factors are carried in the sex chromosome and are different in the two sexes.

The female sperm cell or ovum contains two gametes which is received from its parents.

The male sperm cell or spermatozoid has two gametes for sex which it received from its parents but they are different from the female.

Let the female gametes be represented by xx.
Let the male gametes be represented by xy.
The crosses will be as follows:

XX XY	XX XY	Parent cells
XX	XY	Zygote.
female	male	

Sex-Linked Characters

When a character appears in one sex only, it is said to be sex-linked. There are many such characters. Aside from the difference in form the sex organs, in the human there are the larger body in the male, the beard, the more hairy body, the coarser features, the larger larynx and consequent heavy voice, and many other physical features as well as the different mental traits, and these differences are as marked in all lower species as they are in man.

In the same chromosome with the sex factor and linked with it are the factors for each of these characters; they are dominant in the male, or the one that contains the Y gamete, and recessive in the female, and wherever the Y gamete appears in the zygote, all the male factors appear also.

To illustrate this:

Let xx represent the female parent cell.
Let xy represent the male parent cell.
Let xy— represent the male parent cell with the factor for beard linked to it.

Parents	xx	xy–	xx	xy–	xx	xy–	xx xy–
Zygote	xx		xx		xy–		xy–
	female		female		male beard		male beard

This gives all the possible combinations.

Trihybridism

Some peculiarities such as various fancy colors in animals require as many as three factors for color in the chromosome; this is called trihybridism. Doubtless there are combinations of four or more, but such combinations would be so complicated as to make it impossible to unravel them.

Inherited Diseases and Deformities

Numerous diseases and deformities are hereditary, among them are hereditary cataract, tylosis; palmosis et plantaris, thickening of palms and soles; epidermolysis bullosa, skin blisters from slight causes; xanthoma, yellow patches in the skin; hypertricosis congenita familiaris, loss of hair soon after birth; multiple telangiectasis, multiple small nevus-like spots; monilithrix, a nodose condition of hair; porokeratosis; diabetes insipidis, occasionally hereditary; distichiasis, eye lashes instead of glands inside the lids; ptosis, drooping eye lid; colobomo or irideremia, absence of iris or congenital defect of ectopia lentis, dislocation of the lens.

Among the deformities are brachydactyly, two bones in the fingers and toes like thumbs. This was the first known hereditary deformity, described by Farabee in a family in Pennsylvania and by Drinkwater in an English family. Webbed fingers and toes. Five fingers on one or both hands.

All these are dominant and are transmitted directly from the affected to the offspring.

Sex-Linked Characters

There are certain hereditary diseases or conditions that are sex-linked that have nothing to do with masculine or feminine characters. Color blindness is one of these, also hemophilia and night blindness, and pseudo hypertrophic muscular atrophy.

Color Blindness

Inherited color blindness is an inherited inability to detect certain colors; it has nothing to do with diseases of the eye or optic nerve or conductive apparatus.

Acquired color blindness is due to some disease of the eye, especially the optic nerve. In most cases of optic nerve atrophy, color blindness appears some time before general blindness, and acquired color blindness has some diagnostic value to an oculist.

Color blindness is a recessive character linked to the female gamete. A man who is color blind can not transmit it to either his sons or daughters, but he does transmit the *factor* to all his daughters and they carry it on to one-half of his grandsons.

One man out of every twenty has some difficulty in distinguishing the different shades of color and one out of every twenty cannot distinguish some of the primary colors, while only one-half of one per cent of women are color blind.

Let xx represent the female life cell or ovum, one x or gamete from the father and one from the mother.

Let xy represent the male life cell or spermatozoid, also with two gametes, one from the father and one from the mother.

Let c represent the factor for color blindness which is linked to the x gamete and when the x gamete enters into the formation of the zygote or impregnated ovum, it takes c or the color blind factor with it.

xxc or xcx will represent a color blind carrier female, female because there are two x's or female gametes in the zygote. The zygote also contains c or the color blind factor, but the female will not be color blind because normal vision for color is dominant in females, but she will transmit the factor to her children so that half of her daughters will be color blind carriers and half the sons will be color blind.

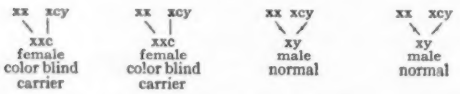
Also xcy will represent a color blind male, there being present both x and y gametes and also the color blind factor c. The man developing from this zygote will be color blind because color blindness is dominant in males.

xcxc will represent a color blind female, a female because there are two x's in the zygote and color

blind because there are two c's or color blind factors in the zygote and none for normalcy.

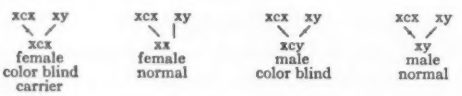
The following diagrams depict all the possible combinations:

1. A normal woman married to a color blind man.



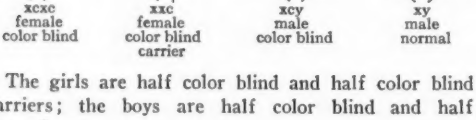
The girls resulting from this union are not color blind because normal vision to color is dominant in females, but they are color blind carriers; the boys are all normal and cannot transmit the defect to their children.

2. A color blind carrier woman married to a normal man.



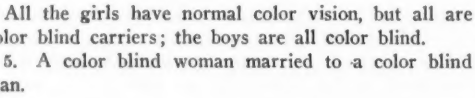
Half of the girls are normal and half are color blind carriers; half of the boys are normal and half are color blind.

3. A color blind carrier woman married to a color blind man.



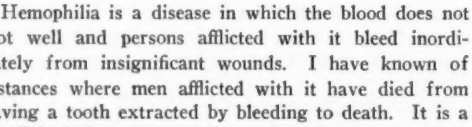
The girls are half color blind and half color blind carriers; the boys are half color blind and half normal.

4. A color blind woman married to a normal man.



All the girls have normal color vision, but all are color blind carriers; the boys are all color blind.

5. A color blind woman married to a color blind man.



All the children are color blind.

Hemophilia

Hemophilia is a disease in which the blood does not clot well and persons afflicted with it bleed inordinately from insignificant wounds. I have known of instances where men afflicted with it have died from having a tooth extracted by bleeding to death. It is a sex-linked character and like color blindness is linked to the x gamete and is also recessive in the female. It is very rare, far more rare than color blindness. It is so rare that a doctor will see but two or three cases in a life time, and often not any. The tables given for color blindness apply also to hemophilia, and the family trees given for hemophilia illustrate color blindness also.

True hemophiliacs are very rare, and they are practically all men. A woman hemophiliac is one of the rarest things in medicine.

Night Blindness

(Inability to see in a dim light)

Night blindness is a rare disease in this country, although there are a few cases, but in Montpelier in southern France there is a number of villages where it is common and 2,116 pedigrees of persons having the disease have been tabulated. It is a sex-linked character, connected with the x gamete in the male but it differs from color blindness and hemophilia in that it is dominant in the female, therefore if a man has night blindness, all his daughters are night blind and they transmit it to half their sons.

The first known case of night blindness was born in 1637. The disease was described by Cunier in 1838.

Pseudo hypertrophic muscular atrophy is also a sex-linked disease.

Fluctuation

Fluctuation is the appearance of some peculiarity in an individual which is non-transmissible and disappears with that individual. A calf born with seven legs, etc., is a fluctuation and not transmitted.

Mutation

Mutation is the sudden appearance in an individual of a feature which has never been present in that species before, and that is transmissible to that individual's progeny. Such individuals are called mutants or freaks or sports. Mutation was known to breeders long before Mendelism was heard of, but is one of the most important features of Mendelism. It is mainly by mutation that changes in species are brought about, and it is probable that mutation has more, or at least as much to do with evolution as natural selection. It is probable that small mutations are taking place in individuals all the time and these being transmitted to other individuals, cause more or less change all the time; and besides this, there are sudden very marked mutations in an individual that start new varieties, and this is a start toward a new species.

Mutations are generally dominant characters and follow simple Mendelian law, and segregate exactly as varieties. The ratio is usually 3 : 1 as to appearance and always 1 : 2 : 1 as to breeding.

No mutant character will develop in an environment that is unfavorable to it, for instance, if in a herd of wild cattle, a male should appear without horns, a muley, he would be driven out of the herd by the other horned males if he did not fall a prey to some other animal and would not be allowed to procreate.

Also a character that is well developed will disappear if the species is placed in an environment unfavorable to that character, for instance a herd of cattle is developed to a large size, then if they are under fed, they fail to develop to the full and their progeny also. Again—shetland ponies on a small

island where the food supply is limited but the climate is delightful, become small, sleek-skinned, beautiful animals, but transplant them to Iceland, and they soon develop long scraggy hair. Such instances illustrating the effects of environment could be given by the hundred.

There are all degrees of dominance in freaks as well as in established species. In peas, for instance, dominance as to tall and short is complete, so that in the first generation of crosses between tall and short, all are tall, and in the second generation, there are three tall to one short, while in the horned and muley hereford cattle, it is not always complete and about half of the first generation are horned and half dehorned and in the second generation the ratio is nearly the same.

Hereford Cattle

Mutation and the working of Mendel's law is beautifully illustrated in breeding the horns off of hereford cattle.

Hereford cattle were developed in Hereford county in England where for hundreds of years they were bred mainly for use as oxen and incidentally for milk. For use as oxen it was desirable that they be tall and long legged that they might be able to walk rapidly, and that they be powerfully muscled and large boned that they might have strength, and that their fore quarters should be heavy so they could pull better and that the neck be developed to support the yoke well. All these characters were developed to the full, by breeding, and incidentally the breeders developed peculiar skin markings that mark the breed and add to the beauty of the animals. They have white faces, a white streak on their shoulders, white bellies, white feet and the bush of the tail is white, and any deviation from these markings decreases the desirability of the animal. Their horns were long and turned upward.

But in the course of time, oxen were no longer used, and then this breed was converted by breeding into a pure beef type. To do this it was necessary to change the type of the animal. So an animal was developed that carried the same horns and the same skin markings as the oxen, but he is short legged, heavy boned, straight backed and broad backed, heavy and square in the hind quarters and loins where the best cuts of beef are.

The western ranges were full of scrub cattle and long horned Texans, and for awhile people bought the beef from them readily, but as people became more prosperous, they became discriminating in their beef, and these tough Texans found a poor market. To overcome that, the ranchers bought thousands of hereford bulls and crossed them with the scrubs and Texans so that in twenty-five or thirty years the western herds were largely high grade herefords.

For a time the long horns of the herefords were considered by the ranchers an advantage because an animal so armed could protect himself against the other horned animals and against wild beasts, but after a time new developments arose and ranchers began to dehorn their cattle, because on the ranches it was found that dehorned animals fought each other less, and when they were shedded, more could be put in the same space, and in shipping, more could be put in a car and less were injured and killed in the cars, and lastly steamship companies began to refuse to ship horned cattle on long voyages.

The breeders of short horns or durhams, as they used to be called, were having the same trouble with their horns. Not far from Minneapolis a farmer named McNaire had a small pure bred herd of short horns and one of his cows, Oakwood Gwynne, in 1881 gave birth to twin heifers that were freaks, having no horns. The next year, the same cow had a male calf but of a different sire from the twins, that also had no horns. The twins were named Mollie Gwynne and Nellie Gwynne and the male was named King of Kine. King of Kine and Nellie Gwynne, although half-brother and sister, were crossed, and the result was a polled male, which was named Ottawa Duke.

Mutant characters are usually dominant and breed true, therefore Ottawa Duke being from two freaks was a dominant dehorner. He was crossed with many cows, mostly horned cows, and had fifty-four sons and seventy-five daughters, and every one of them was polled. That was the beginning of the polled short horns.

It was believed that herefords never had polled freaks, but to be sure, Warren Gammon, a hereford breeder, wrote to all the hereford breeders in America and Canada, and found twelve such freaks, and bought them all, four males and eight females. One male and one female he sold at once to W. W. Guthrie, and they never were on his farm, which was at St. Mary's, near Des Moines.

One of his cows had a scur, which is an imperfect horn, attached to the skin but not to the skull, so was not a genuine mutant, but probably a throw back from mutant ancestor many generations back. She was an irregular breeder throwing both horned and dehorned calves even when crossed with mutants, which proves her to be an heterozygous animal.

One of the males and two of the females proved not to be breeders, and that is a frequent condition with mutants, and is one of the reasons it is so difficult to cross different species; others were not very prolific and some were quite poor as individuals.

Giant was the best of the males, but he had been stunted when a calf and never developed to the full —weighing only 1,800 pounds. He left a numerous progeny and can be said to be the originator of the breed.

About four out of seven of the calves of freaks crossed with horned cattle were polled, showing that dominance in the hereford breed for absence of horns is incomplete—if it were complete, all the first generation would have been without horns. The calves of freaks crossed were nearly all polled.

Mr. Gammon secured the herd of freaks in 1900, the year that Mendel's law was rediscovered, but he knew nothing about it. Had he been familiar with it,

and if breeders generally were familiar with it, their problem would be easier.

Ferns

Very interesting mutations have occurred in ferns within the past few years.

The natural habitat of the common sword fern that you have all seen many times in greenhouses and in your homes, is in the West Indies.

This fern was brought into America from Jamaica in 1793, and became a favorite house plant, and grew without change for a hundred years; then, about thirty years ago a florist near Boston found growing from the roots of this fern another kind of fern, having the same general form as the sword fern but finer and thinner fronds and altogether a mort delicate plant.

Ferns are endogenous or non-flowering plants and propagate by spores instead of seeds and also by adventitious buds in the roots, the same as many flowering plants. This new fern was a mutation from the roots and is called a bud sport. Soon this new form spread all over the United States and was very popular, and known as the Boston fern.

After five or six years, in various parts of the country, some five other forms or mutations from the Boston fern appeared, all differing from each other and all differing from the Boston fern more than it differed from its mother form, the sword fern. Since then many other forms have appeared until now these mutant ferns are more popular than the older forms and are sold by florists by the million.

The anti-evolutionist thinks he has a clinching argument when he says that "no one has yet been able to evolve a new species"; yet within our own lifetime—less than a generation—here are ferns called varieties that differ more from the original sword fern than some other ferns of well recognized species differ from each other.

White Indians

Ever since Magellan crossed the Isthmus of Panama and discovered the Pacific Ocean, there have been rumors of white Indians in the jungles of Central America, which were for the most part treated as others of the fabulous stories of unexplored regions.

In 1923 R. O. Marsh, an engineer searching for rubber lands in Darian, some hundreds of miles east of the Panama Canal, actually saw several of these white Indians. The next year he led another expedition into the same country and had with him several scientists and they saw over 400 of these strange people, and brought eight of them back to America—three white ones and five brown ones. They created a great deal of interest in scientific circles and caused a good deal of newspaper and magazine discussion.

In the early part of this year (1925) a third expedition penetrated the region, headed by Mr. Marsh and accompanied by Prof. R. G. Harris, director of the Long Island Biological Station. Professor Harris gave the Indians a careful study and concludes that:

1. The Indians of Darian are of a high order of physical and mental development.
2. They are a very old race and speak a language different from any other American Indians and which is allied or similar to Sanscrit.
3. They have a rather high order of government and are a very moral people. There are numerous tribes, all under the feudal overlordship of one ruler.
4. Among these Indians, which are brown, are numerous white Indians.
5. The white Indians have originated from the brown by mutation long ago and the white permeates the entire stock to a large extent.
6. This mutation is a permanent change and is hereditary, following the Mendelian law, the white being recessive to the dominant brown.
7. The heredity apparently follows about the same lines as the white and negro races. There are: dark brown—the original type of color; light brown; very light brown, and white.
8. They are not pure albinoes because they have golden yellow hair instead of white, and they have hazel eyes instead of the pink eyes of the pure albinoes. Their physical characteristics are all Indian except the color, showing they are not descended from any cross with Caucasians.[1]

I have shown what I consider beautiful examples of evolution by means of mutation following the Mendelian law that have occurred in the lifetime of everyone here:

1. In the vegetable world in the ferns.
2. In the animal world in the polled cattle.
3. In the human race in the white Indians.

If these marked and visible changes can be brought about within the period of these few years, what is the limit of changes that have been brought about within the geological periods of millions of years?

Inbreeding

Inbreeding is the crossing of near relatives. In the human family it has long been considered to be a disastrous thing for cousins to marry, but the effects of inbreeding depend entirely on the parents, that is, just what they have to transmit. Breeders of domestic animals often inbreed with deliberate purpose, and inbreed more closely than cousins, and often get very good results. If there are strong characters in two individuals that they want brought out or intensified, they cross them, even though they are near relatives—father and daughter, or brother and sister.

The ill-effects of inbreeding in the human race is that there are so often bad characters in families, and if they are crossed, these characters are likely to be preserved in the offspring and even intensified. For instance, if two relatives, each of them having some nervous derangement such as hysteria, this would be intensified in some of the children and there would be extreme nervousness and mental instability or even insanity. And, strangely enough, it is persons that have these defects that are most likely to intermarry.

There are some notable exceptions to this, however. Erasmus Darwin and Josiah Wedgewood were very great friends. They were two great men. Wedge-

1. Good articles on these people may be found in the March, April and June World's Work (1925).

wood was the Henry Ford of his time and, more than that, for he was a statesman and a philanthropist as well as a manufacturer. He it was who brought the manufacture of pottery in England to its own and originated Wedgewood ware and Queensware, and the blue dishes that are now so much desired. Wedgewood married his cousin, Sarah Wedgewood, and their daughter married Robert Darwin, Erasmus Darwin's son, and became Charles Darwin's mother; Charles himself married another Wedgewood, his cousin, and they had four sons. One became professor of astronomy at Cambridge, another became a noted mathematician and the other two both became noted engineers. In this case, there were no hereditary weaknesses in the families and the strong qualities were accentuated.

It was the Egyptian law under the Ptolemies that Pharioh should marry his sister. Cleopatra was the last of the Ptolemies and was married to her brother until Julius Caesar took her away from Egypt to Rome. This is surprising, too, because the Ptolemies were Greek and not Egyptian.

In ancient Peru, it was the law for the Inca to marry his sister, and that was practiced for hundreds of years. The Inca had many wives, but his queen was his sister and their children were heirs to the throne. The custom does not seem to have had any serious effects, for the last Inca before the coming of the Spaniards was a man of exceptional ability, and was a conqueror and organizer and able ruler up to the time he was captured by the Spaniards.

Cancer

Maud Slye, working in the Sprague Institute for Cancer Research in Chicago, for a number of years has been studying mice to determine whether cancer is hereditary. She has raised over 40,000 mice and kept accurate family trees and pedigrees, and all that have died have been autopsied and all laboratory methods used to determine the causes of death. Five thousand tumors have been examined to determine their pathology.

Mice in their wild state are short lived, having so many and relentless enemies, but she keeps them free from all these dangers and in the most perfect hygienic surroundings, so they live out their natural lives.

She found that mice in their breeding follow the simple Mendelian law. A common house mouse crossed with an albino produces three gray and one white in the second generation, gray being dominant to white and in breeding the ratio is 1 : 2 : 1.

Bateson long ago (Mendel's Principles of Heredity, page 74) saw an entirely different condition as related to the colors of domesticated mice, but he worked with mice of no less than six different colors, and found ratios of 12 : 3 : 1 and in others a ratio of 9 : 3 : 4; the colors are agoute, chocolate, cinnamon agoute, blue (dilute black) and silver faun, to say nothing of white and yellow. These are fancy breedings and too complicated to be practical.

Maude Slye found, as before stated, that gray is dominant to white and breeding follows the simple Mendelian law ratio 1 : 2 : 1. She also found that certain mice, if they live long enough—that is, live long enough to reach the cancer age—develop cancer and, what is more, transmit cancer to their offspring, following strictly the simple Mendelian law. Resistance to cancer being dominant and the tendency to cancer recessive. She segregated out dominant strains—those resistant to cancer—that never develop cancer; on the other hand she segregated recessive strains—that with the tendency to cancer—and got families in which every member developed cancer, and she carried these as high as 120 generations.

This would seem to prove conclusive that cancer, at least mouse cancer, is hereditary. If this is true in the human race, the war on cancer is well nigh hopeless, for to prevent people from marrying simply because one or the other's parents or grandparents had cancer would be impossible.

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COLLOIDAL LEAD JOINS X-RAYS AND SURGERY TO RELIEVE CANCER

London.—With thirty almost hopeless cancer cases apparently cured, Prof. Blair Bell's lead treatment comes well to the front, if not to the center, of the crowded arena of cancer research.

Of the 227 partically hopeless cases treated since November, 1920, 30 have been pronounced cured, in ten the cancerous growth has been arrested and nine are considered greatly improved. Dr. J. G. Adami, vice-chancellor of the University of Liverpool, in a comment in the English medical journal *Lancet*, in which Prof. Bell's papers on the lead process of treating cancer have appeared, says that the thirty patients show no sign of lead poisoning or recurrent cancer,

are in good bodily condition and are following their usual occupations.

The funds to carry on this line of cancer research have been furnished by private endowment and are administered by the Liverpool Cancer Research Committee, of which Prof. Bell is now director. In his efforts to find a preparation of lead that would react against the cancerous cells and not harm the surrounding tissue he has been assisted by the department of Physical Chemistry of the University of Liverpool.

This has proved to be one of the most serious problems of the whole method of treatment. Lead salts injected directly into the circulatory system are poisonous. Colloidal lead, with which the best results are obtained, consists of small particles of lead suspended in a state of more or less unstable equilibrium. The problem of the chemistry department of Liverpool, then, has been to devise a method by which a lead colloid could be made more stable and effective. A group of scientists working under Prof. W. C. McC. Lewis have been conducting a series of investigations which, while they have produced a considerable improvement, have not yet been able to make a preparation that will stay suitable for use for more than a few days.

As yet, according to the account in *Lancet*, the product is still so unstable and difficult to prepare as not to warrant the publication of the procedure necessary to make it. It is hoped that ultimately a permanent colloid will be perfected which will be then made available for use in the hands of clinicians carefully trained to administer it.

In his most recently published analysis of his results Prof. Bell stresses the point that much work must still be done to make a more active preparation of lead that will be less poisonous to the system generally. All types of malignant growths, he declares, are probably amenable to the beneficial influence of lead if only enough of the metal can reach them.

He does not hesitate to employ auxiliary measures of surgery, X-rays, or radium when circumstances seem to warrant, but recommends that when the growth has been partly or apparently entirely removed, "intravenous injections of lead should be employed within a few days of the operation when possible."

In conclusion, he states that "the method of treatment is difficult, and to some extent dangerous and can only be safely employed by those who are thoroughly experienced in the work, and have laboratory facilities at their disposal."—*Wayne Co. Bulletin.*

TREATMENT OF UNCOMPLICATED GONORRHEA IN THE FEMALE

HARRY W. MARTIN

That the treatment of gonorrhea is inefficient is shown by the number of salpingectomies that are performed and the incidence of residual gonorrheas in the cervix, urethra and Skene's and Bartholini's glands.

Vaginal douches are valuable only for cleansing purposes before other medication. Germicidal solutions used in this manner are of little value; astringent drugs that control vascular caliber help some.

Tampons aid in extracting water from the engorged cervix, but after a tampon is in the vagina for a short time it hinders drainage and diminishes the germicidal action of the medicament used, but by dilution and by chemical action between the exudate and the germicide.

Vaginal suppositories are of little value, because gelatine melts with difficulty and the resulting solution has only a small penetrating power. Those with cocoa butter base and ointments, are unsatisfactory because their greasy base prevents the action of the medicament on a moist surface.

Painting the vagina and cervix with silver salts is of only very limited value since the endocervix is not included and since the chlorides in the secretions neutralize the silver preparations. The author has used various medicaments by spraying them through a vaginal speculum. Dichloramine-T was found to be inefficient.

The author believes that in order to treat successfully acute gonorrhea in the female, good drainage and frequent or semi-continuous medication of the vagina are necessary. The medicament should be a preparation that does not react with the secretions and form a chemically inactive substance. In the author's opinion, acriflavine seems to fit these requirements to a high degree.

The author recommends the following technic which must be demonstrated on the patient by a nurse who has been trained to do it properly. A rubber sheet is placed on the bed in the manner of the ordinary draw sheet. To avoid the running of any medicament which is spilled on the rubber sheet, a cotton blanket folded to a size about 2 feet square, is placed on top of the rubber sheet under the patient's buttocks, the covers being drawn down to the ankles. About 25 c.c. of 1: 500 to 1:1500 acriflavine solution are placed in a glass beside the bed. From this glass a Day syringe is filled, inserted into the vagina and gently emptied. The vagina should have been previously cleansed by a douche.

If the patient injects the acriflavine solution in the manner described and then lies in the recumbent position for at least 30 minutes, the acriflavine will have an opportunity to penetrate into the walls and mucous glands of the cervix and endocervix. This procedure carried out twice daily will usually relieve the cervical gonorrhea and vaginitis, even though it has no effect on the salpingitis. It cannot cure bartholinitis, but the quicker the cervical gonorrhea is cleaned up the less danger there is of later involvement of either the tubes or Bartholini's glands.

For urethritis, ordinarily the gentle instillation of 40 to 50 c.c. of acriflavine solution—1:3000 to 1:1000 into the bladder through a glass catheter and having the patient urinate immediately afterward is recommended. The urethra is distended by the act of urination and the flavine solution comes in contact with its every portion.

If a trigonitis and severe inflammation of the neck

of the bladder should develop, instillations of 2 per cent argyrol in the same quantity and having the patient urinate immediately afterward, is advised.

For dysuria, santol oil may be of value, but an abundance of fluids with sodium citrate in 30 gr. doses four times daily, is more reliable. Lemonade and most fruit juices are also beneficial. Tea and coffee may help because they are diuretic. Food substances which irritate the urethra are interdicted, such as alcohol, ginger ale, asparagus, onions, radishes, cabbage, condiments, pickled or spiced foods, and vinegar. —*Medical Journal and Record,* Feb. 17, 1926.

THIS MATTER OF PROSTITUTION

If the opinion of certain well-meaning reformers is to be followed all we need do to combat the grave problem of prostitution is to employ the modern day method of correcting social wrongs and enact more legislation. In short, according to these reformers, let our legislative bodies pass a few rigorous laws against prostitution and, zip, the evil ceases to exist. But trained medical men who have studied the problem have strong doubts of the value of such restrictive legislation. There are too many factors involved, factors that man-made laws cannot reach. For example, Prof. von During says it is futile to talk of combating prostitution since it always has existed and always will.

In the matter of prostitution and a consideration of its abolition, it is well to remember that there are two powerful influences at work filling the ranks of prostitutes. These are inherited tendencies, weakening moral inhibitions, and environment.

Von During says, in confirmation of this charge that evil careers have an ancestral origin or, latent, are developed through unfavorable environments, that as official in charge of the observation and training of wayward boys from 14 to 18 years of age, he had rich opportunities to watch these embryonic criminals and that the majority of them actually did become criminals. It is the belief of von During that "most of them could not have been otherwise." He says the same can be stated of girls. In a large institution for girls near Hamburg, but two per cent of the girls taken from the streets and brought into this institution could be classed as normal. In another home of this character, the house physician writes: "Among fifty-four girls brought in during the past week, there was but one normal girl." It is going to take more than legislative acts, even American legislative acts, to change this condition.

We venture the statement that any physician, reading these lines, who will think back over his practice and recall to mind those women who were actual prostitutes, will have much difficulty in remembering a single one who showed the slightest evidence of having been started in life right. The vast majority of these unfortunates are uneducated, untrained, undisciplined, and, in general, unfitted to meet the demands of modern life.

In view of these facts one can hardly expect to have much hope that legislation can solve this problem. Even in education we cannot find much of encouragement, for it is a bald fact, which must be faced, that a considerable percentage of these women are utterly incapable of absorbing an education or training sufficient to lift them out of the low moral level into which their heredity has put them. Disease sterilizes most of them, for which the rest of the world should be thankful. And this thought probably is not as cruel as it appears, for we must remember that this sterilization by disease has saved countless thousands from being brought into the world to follow in the footsteps of their mothers in obedience to the inexorable laws of heredity.

The next few generations will not see the end of prostitution, but its sane control may lie in compulsory sterilization, in fact, a future civilization fighting for its very existence on an over-crowded globe may, in self-protection, go much further than the sterilization of the wanton, and sterilize both males and females whose progeny is likely, according to the laws of heredity, to be of little or no value to society.—*Urologic and Cutaneous Review.*

Book Reviews

HANDBOOK OF DISEASE OF THE RECTUM. By Louis J. Hirschman, M.D. With two hundred and fifty-two illustrations, mostly original and five colored plates. Fourth edition revised and rewritten. St. Louis. The C. V. Mosby Company. 1926. Price $6,50.

This work has gone through four editions in rapid succession. This volume brings the subject up to date.

MODERN METHODS OF AMPUTATION. By Thomas G. Orr, M.D. One hundred and twenty-five illustrations. St. Louis. The C. V. Mosby Company. 1926. Price $3.50.

In this work the author includes only those methods that are practical and workable. The subject is handled in a brief and concise manner and should aid materially in standardizing amputation technic and should assist the operator in obtaining good functional results.

YOUNG'S PRACTICE OF UROLOGY. Based on a study of 12,500 cases. By Hugh H. Young, M.D., and David M. Davis, M.D., Johns Hopkins University. With the collaboration of Franklin P. Johnson. Two octavo volumes totaling 1,484 pages with 1,003 illustrations, 20 being color plates, by William P. Didusch. Philadelphia and London. W. B. Saunders Company. 1926. Pet set, cloth, $25.00 net.

This work is based on the study of 12,500 case histories representing the authors personal experience at the James Buchanan Brady Urological Institute. The author justifies the various procedures, mechanical devices and original researches which had their inception with him and his able assistance and confreres.

DISEASE PREVENTION. By Herbert H. Waite, M.D., New York. Thomas Y. Crowell Company. 1926.

This work is intended for social workers, students of public health and hygiene, hospitals, boards of health and other public organizations. The author

brings to bear a great mass of historical and bacteriological data. It summarizes in an impressive way what has been done, and is being done, by science to check disease.

SIXTY YEARS IN MEDICAL HARNESS OR THE STORY OF A LONG MEDICAL LIFE, 1865-1925. By Charles Beneulyn Johnson, M.D. New York. Medical Life Press. 1926. Price, $3.00, postpaid.

This work portrays the experiences and observations of an every-day country doctor. The author has been frank in naming his mistakes and failures and in the same spirit to note his success and his achievement.

OCCUPATION AS A SUBSTITUTE FOR RESTRAINT IN THE TREATMENT OF THE MENTALLY ILL. By L. Vernan Briggs, M.D. Boston. Wright & Potter Printing Company. 1923.

This volume is issued as a mental hygiene document; it is issued with the purpose of giving to the public the history of how the use of restraint in our hospitals for the mentally ill was placed by law entirely in the hands of the superintendent; also to show how the use of occupational therapy was stimulated to take the place of restraint in the treatment and care of our mental patients.

GOULD AND PYLE'S POCKET CYCLOPEDIA OF MEDICINE AND SURGERY. Third edition. Revised and enlarged and edited by R. J. E. Scott, M.D. Philadelphia. P. Blakiston's Son and Company. 1926. Price, $2.50 and with thumb index, $3.00.

The book, as you will see, consists of brief articles, alphabetically arranged on various subjects in the field of medicine and science. It includes drugs, anatomical terms, tests, tables, etc., and describes all facts of general interest concerning them. It is a useful book of reference.

MEDICAL DIAGNOSIS FOR THE STUDENT AND PRACTITIONER. By Charles Lyman Green, M.D. Sixth Edition. Revised and enlarged. With 14 colored plates, and 709 other illustrations. Philadelphia. P. Blakiston's Son and Company. 1926. Price $12.00.

Many important changes have been made; a number of new diseases have been included and the author has expanded various sections; added a number of new illustrations among which are two new series of cardiograms and polygrams. A very large number of new and modern tests in various subjects are included. The Symptom Index is fused with the General Index in this edition. There are 14 colored plates and 709 text illustrations.

MANUAL OF HYGIENE AND SANITATION. By Seneca Egbert, M.D. Eighth edition, enlarged and thoroughly revised. Illustrated with 154 engravings and 4 plates. Philadelphia & New York. Lea & Febiger. 1926. Price, $4.00.

Since the publication of the seventh edition marked advances have been made in every division in the science of hygiene and sanitation. The entire book has been revised, a wealth of new matter has been added and the work has been brought strictly up to date.

THERAPEUTICS MATERIA MEDICA AND PHARMACY. By Samu'l O. L. Potter, M.D. Fourteenth edition. Revised by R. J. E. Scott, M.D. Philadelphia. P. Blakiston's Son & Company. 1926. Price $8.50.

This work is intended to serve as a compendium of information regarding both official and non-official drugs and preparations. Much new material has been added and many statements have been modified, several paragraphs have been deleted. The official preparation of the Materia Medica has been brought into conformity with the U.S.P.X.

DISEASES OF THE NEWBORN. By John A. Foote, M.D. Philadelphia, London and Montreal. J. B. Lippincott Company. 1926. Price $5.00.

This volume is concerned alone with the diagnosis and treatment of the disabilities most commonly seen in the newborn and facts relative to the alarmingly high death rate during the first weeks of life, which has been little affected by out notable progress in other fields of infant hygiene endeavor. This work includes chapters by such well known writers as Prentiss Wilson, M.D.; James M. Moser, M.D.; William F. O'Donnell, M.D., Frederick J. Eichenlaud, M.D., and John F. O'Brien, M.D., of the faculty of the Georgetown Medical School.

THE SURGICAL CLINICS OF NORTH AMERICA. (Issued serially, one number every other month.) Volume VI, Number 1. (Philadelphia Number, February, 1926.) 325 pages with 136 illustrations. Per clinic year (February, 1926, to December, 1926.) Paper, $12.00; cloth, $16.00 net. Philadelphia and London. W. B. Saunders Company.

The contributors to this number are Doctors Babcock, Beheney, Behrend, Beltran, Benson, Jr., Birdsall, Block, Clerf, Eliason, Elliott, Ferguson, Frank, Gill, Harrison, Hinton, Ivy, Jopson, Keene, Keller, Kimbrough, Klopp, Llewellyn, Norris, Pendergrass, Pfeiffer, Sappington, Schumann, Smyth, Jr., Sylvis, Thomas.

OPERATIVE CYSTOSCOPY. By E. Canny Ryall, F.R.C.S. Extra large size 9x12, with 115 plates containing 670 original illustrations, of which 528 are colored. St. Louis. C. V. Mosby Company. 1925. Price, beautiful silk cloth binding, with gold stamping, $25.00.

This work is one of the most important books of its kind ever issued. It embodies the results of long and progressive work. The many colored plates, all original and taken from patients under the author's care, have been selected from a very extensive collection. A feature is made of representing the successive stages of treatment in particular cases of typical character, beginning with the first cystoscopy and ending with the final one. The work is divided in four chapters as follows:

I. ANAESTHESIA

TECHNIQUE.

1. The Drug.
2. The Concentration and Amount.
3. The Method of Application.

II. URETER

1. Ureteric Calculi.
   - (1) Injection Method.
   - (2) Catheter Method.
   - (3) Dilatation Method:
     - (a) Employment of a Metal Expanding Dilator.
     - (b) Dilatation with Laminaria Tents.
   - (4) Diathermic Method:
     - (a) Dilatation with Metal Olives.
     - (b) Employment of Diathermic Electrode.
   - (5) Scissors Method.
   - (6) Combined Methods.

   Special Appliances:
   - (a) Wax-tipped Catheter.
   - (b) Ureteric Transilluminator.
2. Narrowing of the Ureteric Orifice.
3. Ureterocele.

III. BLADDER

1. Vesical Calculi.

   Cystoscopic Litholapaxy.
   Cystoscopic Lithotrites.
   Cystoscopic Cannule.
   Technique.
2. Foreign Bodies in the Bladder.
3. Vesical Cysts.
   - (1) Non-Cervical Vesical Cysts.
   - (2) Cervical Cysts.
4. Growths in the Bladder.

   The Author's Diathermy and High-Frequency Apparatus.
   High-Frequency Currents.
   Description of the Apparatus Necessary for Producing High-Frequency Currents:
   1. Static Transformer.
   2. Condenser.
   3. Spark Gap.
   4. Self-Induction.

   Description of the Author's Diathermy and High-Frequency Apparatus.
   Electric Supplies.
   Method of Using Foot-Switch:
   - (a) Hospital Type.
   - (b) Portable Type.

Diathermy Technique.

IV. PROSTATE

(A) Use of Diathermy in Prostatic Diseases Indications.

(a) Fibrous Types of Obstruction.
1. Transverse Fibrous or Median Bar Obstruction.
2. Circular Fibrous or Collar Bar Obstruction.

(b) Glandular Types of Obstruction.
1. Nodular Ring Obstruction.
2. Obstruction Caused by Hypertrophy of the Suburethral and Subtrigonal Glands.
3. Middle Lobe Obstruction.
4. Lateral Lobe Obstruction.

(c) Conditions Met with After Prostatectomy.
1. Nodules of Prostatic Tissue Left after Incomplete Operations.
2. Contracted Vesical Orifice.

(d) Carcinomatous Stricture of the Internal Meatus.

(e) Prostatic Abscess.

(f) Encysted Prostatic Calculi.

Technique.

(B) Complications following Prostatectomy

(a) Suprapubic Fistula.

(b) Obstruction at the Vesical Orifice Following Prostatectomy.
1. Partial Obliteration of the Internal Meatus.
2. Complete Blockage of the Internal Meatus.

(c) Vesical Calculi Following Proslatectomy.

APPENDIX

The Author's Universal Cysto-Urethroscope

Pygmalion, or the Doctor of the Future. By R. M. Wilson, M.B. Ch.B. New York. E. P. Dutton & Company. Price, $1.00.

This work the author draws a vivid, encouraging pen picture of what the doctor of the future may be and what he will probably be able to accomplish in the way of cures.

That the physician of the future will not be the "scientist" of the orthodox type, as is now usually assumed, but "a humanist, a man with the widest possible knowledge of human nature and the deepest possible understanding of human motives," Dr. Wilson contends. "I look forward," he says, "to the time when the practice of medicine will include, within its scope, every influence of known potency over the human spirit, and when the practitioner, like Pygmalion, will look on his work and see, not disease and death, but the glowing lineaments of life."

Nephritis. By Herman Elwyn, M.D. New York. The Macmillan Company. 1926. Price, $5.00.

In this book the author has presented the individual forms of nephritis with an attempt to correlate the clinical phenomena with the pathological changes. In this connection he has discussed the normal function of the kidney, renal insufficiency, hypertension, and uremia. In discussing the kidney of pregnancy the author has ventured to offer a new explanation for the occurrence of enclampsia of pregnancy.

Ophthalmic Neuro-Myology. By G. C. Savage, M.D. 39 full page plates and 12 illustrative figures. Second edition. Published by the author, 167 Eighth Avenue, North, Nashville, Tennessee. 1926. Price, $3.00.

In this edition, seven pages (6 to 12) have been rewritten, because of the discovery that the eye has only two axes of rotation, the verticle and the transverse.

Four pages have been added descriptive of the monocular phorometer perfected by de Zeng, collaborating with the author.

Evolution, Genetics and Eugenics. By Horatio Hackett Newman. Chicago, Illinois. University of Chicago Press. 1926. Price,

A new edition of "Evolution, Genetics, and Eugenics,"

completely revised, and interpreting some of the aspects of the recent anti-evolution campaign in the United States.

This valuable collection of excerpts was originally brought together by Horatio Hackett Newman in 1921. In his revision Professor Newman has taken into account the recent rapid developments in evolutionary science and has once more made the book the most modern as well as the most comprehensive account of the subject to be had in one volume.

THE PRINCIPLES AND PRACTICE OF ENDOCRINE MEDICINE. By William Nathaniel Berkeley, M.D. Illustrated with 56 engravings and 4 colored plates. Philadelphia and New York. Lea & Febiger. 1926. Price, $4.50.

The practice of endocrine medicine is becoming daily a more important and fruitful field of medical labor. The book is primarily meant for doctors in active practice. The standpoint of the writer is that of a clinical practitioner. Symptoms and diagnosis are discussed at length, and treatment is emphasized. Many details of treatment and dosage are given which have been heretofore inaccessible in print in any language.

In view of the practical aim of the book, many topics of exclusively scientific interest have been only touched on.

INTESTINAL TUBERCULOSIS. ITS IMPORTANCE, DIAGNOSIS AND TREATMENT. A STUDY OF THE SECONDARY ULCERATIVE TYPE. By Lawrason Brown, M.D., and Homer L. Sampson. Illustrated with 112 engravings. Philadelphia and New York. Lea & Febiger. 1926. Price, $4.00.

The difficulty of diagnosis of intestinal tuberculosis has for years received little attention from students of tuberculosis. The methods of diagnosis herein described has radically changed this point of view. Since the publication of the authors' first communication on this subject a greater number of apparent recoveries from intestinal tuberculosis have been recorded and can be found in the literature up to that time.

PRACTICAL HELPS IN THE STUDY AND TREATMENT OF HEAD INJURIES. By Adolph M. Hanson, M.D. With 91 illustrations. Boston. Richard G. Badger, publisher. 1925. Price, $3.00.

This work is a thoroughly practical handbook for the busy physician. The writer has succeeded by simple illustrations and photographs rather than by much writing, to render as clear as possible the elementary facts that are so essential to a clear understanding of the subject.

MODERN MEDICINE, ITS THEORY AND PRACTICE, IN ORIGINAL CONTRIBUTIONS BY AMERICAN AND FOREIGN AUTHORS. Edited by Sir William Osler, Bart., M.D. Third edition, thoroughly revised. Re-edited by Thomas McCrae, M.D., assisted by Elmer H. Funk, M.D. Volume II, illustrated. Philadelphia and New York. Lea & Febiger. 1925. Price, $9.00.

The contributors to this volume are Doctors E. J. G. Beardsley, Thomas R. Boggs, Sir David Bruce, James Caroll, John W. Churchman, Thomas D. Coleman, Lewis A. Conner, Charles F. Craig, Bowman Corning Crowell, Ernest C. Dickson, George Dock, Elmer H. Funk, Norman B. Gwyn, Robert Hutchinson, George Low, Thomas McCrae, William Everett Musgrave, Sir William Osler, Frederick J. Poyton, Mazyck P. Ravenel, John Ruhrah, J. W. W. Stephens, Charles Ward L. Stiles, George Frederick Still, Richard P. Strong, John L. Todd, Edward Jenner Wood.

NON-SURGICAL TREATMENT OF DISEASES OF THE MOUTH, THROAT, NOSE, EYE AND EAR. By Thomas H. Odeneal, M.D. Philadelphia. P. Blakiston's Son & Company. 1926. Price, $4.00 net.

This work will prove of distinct value to the general practitioner in his care of the various infections. The diagnosis and treatment of diseases of the mouth, throat, nose, eye and ear and their relation to other parts of the body is of paramount importance in the every day treatment of disease. This work covers the subject in a practical way.

EARS AND THE MAN. STUDIES IN SOCIAL WORK FOR THE DEAFENED. By Annetta W. Peck, Estelle E. Samuelson and Ann Lehman. Philadelphia. F. A. Davis Company. 1926. Price, $2.00.

This work represents the gathered opinion of fourteen years of experience instructing and care of the deaf.

FOOD FOR THE DIABETIC. WHAT TO EAT AND HOW TO CALCULATE IT WITH COMMON HOUSEHOLD MEASURES. By Mary Pascoe Huddleson. With an introduction by Nellis Barns Foster, M.D. Second edition. Revised. New York. The Macmillan Company. 1926. Price, $1.25.

THE DOCTOR FIRST AND LAST

I am the Man who signed your Birth Certificate and the Man who will sign your Death Certificate. I stand by you in the hour of greatest Happiness and the hour of deepest Sorrow. I listen to your confessions not breathed to another Soul and keep them inviolate.

My Life Work is consecrated to serving and administering to your Physical wants, night or day, rain or shine. I am at your Beck and Call. I sacrifice my rest, my pleasure, my strength to comfort you.

As I wend myself past the year stones of life toward the Eternal sunset, I am striving to be more charitable, more unselfish and more kindly towards fellow man.

I am the first one you think of in time of sickness and the last one thought of in time of Health.

I am not rich because I serve suffering Humanity, which embraces the poor whom we have with us always.

I am the man who cannot pay his grocery bill, his dry goods bill, his drug bill or in fact any bill on earth until I am paid by you. I am,

YOUR FAMILY DOCTOR.

—*Med. Insurance.*

HISTORICAL REFERENCE WORKS POSSIBLY OVERLOOKED

Bibliography of Illinois Medical History

The committee of medical history prints below a fairly complete list of works consulted to date and works that are in process of investigation for medical data for embodiment in the forthcoming Medical History of Illinois. These works are listed with exact copies of their titles, authors, publishers and dates of publications. The county histories cover a period from the beginning of settlement up until about 1880, some for a slightly longer period. Many collateral works have been consulted as per list published below following the county history mentioned above. There is a dearth of material on some of the counties.

Physicians having knowledge of Historical Reference works other than that mentioned in the following bibliography relating to medical history in Illinois should send it to the Committee on Medical History, 6244 North Campbell Avenue, Chicago, Ill.

History of Medicine and Surgery and Physicians and Surgeons of Chicago. The Biographical Publishing Corporation, Chicago, 1922.

American Medical Biographies by Howard Kelly, M. D., and Walter L. Burrage, M. D. The Norman Remington Company, Baltimore, 1920.

Physicians and Surgeons of America. A Collection of Biographical Sketches of the Regular Profession. By Irving A. Watson, M. D., 1896.

A Group of Distinguished Physicians and Surgeons of Chicago. Compiled by F. M. Sperry. J. H. Beers and Company, 1904.

Quincy and Adams County history and representative men. David F. Wilcox, ed. Chicago and New York, The Lewis publishing company, 1919.

The genesis of Adams county, by William D. Barge.

The history of Adams County, Illinois. Chicago, Murray, Williamson and Phelps, 1879.

The genesis of Alexander County, by William D. Barge.

History of Alexander, Union and Pulaski counties, Illinois. Ed. by William Henry Perrin. Chicago, O. L. Baskin & Co., historical publishers, 1883.

Official book of the Fort Armstrong Centennial Celebration, 1816-1916.

Historical Register of Officers in the Continental Army, 1775-1783.

Historical Register and Directory of the United States Army Surgeons, by Heitman. v. 1. (The articles we wish to get are those on Surgeons and Forts in Vol. 2. This volume cannot be found at the Chicago libraries.)

Portrait and biographical record of Montgomery and Bond counties, Illinois. Chicago, Chapman Bros., 1892.

The genesis of Bond County, by Wm. D. Barge.

History of Bond and Montgomery counties, Illinois. Ed. by William Henry Perrin. Chicago, O. L. Baskin & Co., historical publishers, 1882.

The past and present of Boone County, Illinois. Chicago, H. F. Kett & Co., 1877.

The genesis of Boone County, by William D. Barge.

Combined history of Schuyler and Brown counties, Illinois. Phil. W. R. Brink & Co., 1882.

The Brown County ossuary (in Illinois State Historical Society Journal, 1908, v. 1, p. 33-43), by Snyder, J. F.

The genesis of Brown County, by Wm. D. Barge.

Map of Bureau County with sketches of its early settlement. Chicago, Tribune company, 1867.

Beautiful Bureau. A collection of photographic reproductions of the picturesque, historical or otherwise interesting scenes of Bureau County, Illinois, by C. W. Skilling and C. H. Masters. Princeton, Illinois, 1894.

The voters and tax-payers of Bureau County, Illinois. Containing also a biographical directory. Chicago, H. F. Kett & Co., 1877.

The genesis of Bureau County, by William D. Barge.

History of Bureau County, Illinois. Chicago, World Pub. Co., 1885. Bradsby, H., ed.

Reminiscences of Bureau County, Illinois, by N. Matson. Princeton, Ill., Republican Book and Job Office, 1872.

Calhoun County business directory for 1869-70. Battle Creek, Mich., E. G. Rust, 1869.

Portrait and biographical album of Pike and Calhoun counties, Illinois. Chicago, Biographical publishing co., 1891.

The genesis of Calhoun County, by William D. Barge.

The genesis of Carroll County, by William D. Barge.

The history of Carroll County, Illinois. Chicago, H. F. Kett & Co., 1878.

Some beginnings in central Cass County, Illinois (in Journal of the Illinois state historical society, 1917, v. 9, p. 470-482).

County seat battles of Cass County, Illinois (in Illinois state historical society Journal, 1914, v. 7. p. 166-194).

The genesis of Cass County, by Wm. D. Barge.

Early history of the "Sagamon County," being notes on the first settlements in the territory now comprised within the limits of Morgan, Scott and Cass counties. Davenport, Iowa, 1873.

History of Cass County, Illinois. Chicago, O. L. Baskin & Co., 1882.

Historical sketch of Cass County, Illinois; an oration delivered July 4, 1876, at Beardstown, Ill. Beardstown, Ill. "Cass County messenger," 1876.

Medicine in Champaign Co. A Historical Sketch by Chas. Johnson.

The genesis of Champaign County by Wm. D. Barge.

A history of the early settlement of Champaign County, Ill., by J. O. Cunningham. Urbana, Illinois, 1876. Pub. in the Champaign County Herald.

History of Champaign County, Illinois. Philadelphia, Brink, McDonough & Co., 1878.

History of Chicago by Andreas. Vol. 2, from 1857-1871. A. T. Andreas Pub. Co., 1885.

Bulletin of the Society of Medical History of Chicago. 1911.

Early Med. Chicago.

History of Medicine and Surgery and Physicians and Surgeons of Chicago, 1803-1922. Published under supervision of Chicago Medical Society. The Biographical Publishing Co., Chicago.

Portrait and biographical record of Christian County, Illinois. Chicago, Lake City publishing co., 1893.

History of Christian Co., Ill. Philadelphia, Edwardsville, Ill., Brink, McDonough & Co., 1880.

The genesis of Christian county, Illinois, by Wm. D. Barge.

The genesis of Clark County, by Wm. D. Barge.

History of Crawford and Clark counties, Illinois. Ed. by Wm. Henry Perrin. Chicago, O. L. Baskin & Co., Historical Publishers, 1883.

History of Wayne and Clay Counties, Illinois. Chicago, Globe pub. co., 1884.

The genesis of Clay County, by Wm. D. Barge.

History of Marion and Clinton Counties, Illinois. Philadelphia, Brink, McDonough & Co., 1881.

Portrait and biographical record of Clinton, Washington, Marion and Jefferson Counties, Illinois. Chicago, Chapman publishing co., 1894.

The genesis of Clinton County, by William D. Barge.

The genesis of Coles County, by Wm. D. Barge.

The history of Coles County, Illinois. Chicago, W. LeBaron, jr., & Co., 1879.

Medical Congress of the World's Fair. Vol. 14. Congresses. History of the World's Columbian Exposition.

The genesis of Crawford County, by Wm. D. Barge.

History of Crawford and Clark counties, Illinois. Ed. by Wm. Henry Perrin. Chicago, O. L. Baskin & Co., Historical publishers, 1883.

The genesis of Cumberland County, by Wm. D. Barge.

Counties of Cumberland, Jasper and Richland, Illinois. Historical and biographical. Chicago, F. A. Battery & Co., 1884.

DeKalb County Old Settlers' association. Miscellaneous pamphlets.

The voters and tax-payers of DeKalb County, Illinois; containing also a biographical directory. Chicago, H. F. Kett & Co, 1876.

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History of DeKalb County, Illinois. Chicago, O. P. Bassett, 1868.

Portrait and biographical album of DeKalb County, Illinois. Chicago, Chapman brothers, 1885.

History of DeWitt County, Illinois. By W. R. Brink & Co., 1882, Philadelphia.

Portrait and biographical album of DeWitt and Piatt counties, Illinois. Chicago, Chapman bros., 1891.

The genesis of DeWitt County. By William D. Barge.

Diseases of the Interior Valley of North America I and II, by Daniel Drake.

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Slavery in Douglas County (in State his. soc. Journal, 1918), by Reat, J. L.

History of DuPage County, Illinois. Comp. under the direction and supervision of the Board of supervisors, 1876. Aurora, Ill., Knickerbocker & Hodder, 1877.

History of DuPage County, Illinois, by Rufus Blanchard. Chicago, O. L. Baskin & Co., 1882.

DuPage Co., Ill. Blodgett, Henry W. Autobiography. Waukegan, 1906.

A history of the county of DuPage, Illinois; containing some account of its early settlement. By C. W. Richmand & H. F. Vallette. Chicago, Steam presses of Scripps, Bross & Spears, 1857.

The genesis of Edgar County. By Wm. D. Barge.

The history of Edgar County, Illinois. Chicago, Wm. LeBaron, jr., & Co., 1879.

Letters from Illinois; illustrated by a map of the United States, showing Mr. Birkeck's journey from Norfolk to Illinois and a map of English Prairie and the adjacent country, by John Melish. Phil. M. Carey and son, 1818.

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History of the English Settlement in Edwards County, Illinois. (Clippings from the Albion Register, 1911-1912.)

Forty Years of Pioneer Life—Memoir—by John Mason Peck.

Letters from Lexington and the Illinois, containing a brief account of the English settlement in the latter territory and a refutation of the misrepresentations of Mr. Cobbett, by Richard Flower. London, Printed by C. Teulon, for J. Ridgway, 1819.

Illinois in the Eighteenth Century. Old Fort Chartres and Col. John Todd's record book by Edward G. Mason, Chicago. Fergus Printing Co. 1881.

Letters from the Illinois, 1820-21; containing some account of the English settlement at Albion and its vicinity, and a refutation of various misrepresentations, those more particularly of Mr. Cobbett; with a letter from M. Birbeck, and a preface and notes by Benjamin Flower. London, James Ridgway, 1822.

Personal narrative of travels in Virginia, Maryland, Pennsylvania, Ohio, Indiana, Kentucky; and of a residence in the Illinois territory: 1817-1818, by Elias Pym

Fordham; with facsimiles of the author's sketches and plans; ed. by Frederic Austin Ogg. Cleveland, The A. H. Clark company, 1906.

Two years' residence in the settlement on the English prairie, in the Illinois country. By John Woods (1820-21). London, Longman, Hurst, Rees, Orme, and Brown, 1822.

The genesis of Edwards County, by Wm. D. Barge.

The Edwards County centennial celebration, Albion, Illinois, September 18, commemorating the centenary of the statehood of Illinois, the centenary of the beginning of the English settlement of Edwards County, the centenary of the founding of Albion. Comp. by Walter Colyer. Albion, Ill., Albion register print, 1918.

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History of Effiingham County, Illinois. Edited by Wm. Henry Perrin. Chicago, O. L. Baskin & Co., 1883.

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Historical Encyclopedia of Illinois, ed. by Newton Bateman, LL.D., Paul Selby, A.M.; and history of Fayette County, ed. by Robert W. Ross, John J. Bullington. Chicago, Munsell publishing company, 1910.

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Scrap-book of Fulton County, Ill. (Lewistown weekly Republican, October 1, 1897.)

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Genesis of Gallatin County. By William D. Barge.

History of Galatin, Saline, Hamilton, Franklin and Williamson Counties. Chicago, Goodspeed, 1887. xiii, 961.

The genesis of Greene County. By William D. Barge.

Greene County: born 100 years ago (in Ill. state hist. soc. Journal, 1920), by Bradshaw, Charles.

Historical Encyclopedia of Illinois, ed. by Newton Bateman, LL.D., Paul Selby, A. M., and history of Grundy County (historical and biographical) by special authors and contributors. Chicago, Munsell publishing company, 1914.

Historical oration delivered at Morris, Ill., July 4th, 1876. Morris, Ill., Reformer office, 1876.

The genesis of Grundy County, by William D. Barge.

History of Grundy County, Illinois. Chicago, O. L. Baskin & Co, 1882.

The genesis of Hamilton County. By William D. Barge.

History of Hancock County, Illinois. By Th. Gregg. Chicago, C. C. Chapman & Co., 1880.

The genesis of Hancock County. By Wm. D. Barge.

Harper's Encyclopedia of United States History.

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History of Medical Education and Institutions in the United States from the first settlement of the British Colonies to the year 1850, by N. S. Davis. Chicago, S. C. Griggs & Co., 1851.

Illinois State Board of Health Report on Medical Colleges and the Regulation of the Practice of Medicine in the United States and Canada, 1765-1889. By John H. Rauch, M. D., Secy.

Conspectus of the Medical Colleges of America. Compiled by the Illinois State Board of Health. Springfield. H. W. Rokker, State Printer and Binder. 1884.

Educational History of Illinois, 1912. By J. W. Cook.

Medical and Dental Colleges of the West. Historical and Biographical. By H. G. Cutler. Chicago. The Oxford Publishing Co. 1896.

Medical Education in Chicago in 1882 and after. By Holmes, Bayard Taylor.

Chicago as a Medical Center. By Newton McDonald. 1909.

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The Biographical Review of Johnson, Massac, Pope and Hardin counties, Illinois. Chicago, Biographical publishing co., 1893.

The genesis of Hardin County, by Wm. D. Barge.

Recollections of pioneer and army life, by Matthew H. Jamison, lieutenant E company, Tenth regiment, Illinois veteran volunteer infantry. Kansas City, Hudson press (1911).

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History of Medicine in the United States by Francis R. Packard, M. D. J. B. Lippincott Co., Philadelphia. 1901.

History of Mercer and Henderson Counties, together with biographical matter, statistics, etc. Chicago, H. H. Hill and company, 1882.

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NEW OBSERVATIONS OF SYPHILIS

We have for a long time believed that syphilis belonged specifically to man, did not occur in lower animals under natural conditions, and could be transmitted to very few of them by inoculation. Certain monkeys were available for experimentation and it was not until monkeys were used that we gained any great amount of knowledge concerning the disease. Now comes the news that the llama has been found to be a carrier of syphilis. The treponema found in this animal is said to be identical with that found in man, and female llamas have been successfully infected from human lesions. On the other side, an accidental infection of a laboratory worker has proved that the treponema found in the llama is virulent for man.

Since syphilis has been endemic in Peru for many centuries, the interesting question comes up as to whether man or the llama was the original carrier of the infection. While the disease in the llama is entirely analogous to that in the human, the course is shorter and the tertiary period occurs in from two to three years after the original infection.

The point of special interest is the statement that a curative serum has been produced for the llama. After ten to fifteen inoculations with an attentuated culture, the llama produces an anti-serum which is curative for these animals. The experiments which have been carried out in Buenos Aires seem to have been well checked. Animals cured by the serum have lived from three to ten years, while the controls have all died from general paralysis in less than three years. The young of treated animals have been entirely free from the disease. The use of the serum in man has been entirely and rapidly favorable, surpassing the older therapeutic methods in efficacy. Whether the cure will be permanent in man remains to be seen. The Pasteur Institute of Paris is at present obtaining llamas for extension of these interesting experiments. It seems, however, that we have good ground for believing that a real advance has been made and hoping that a rapid and permanent cure of this terrible disease will soon be in the hands of physicians.—*A. J. of P. H.*

STICKING TO HIS GUNS

Doctor—"Undoubtedly you need more exercise—what is your occupation?"

Patient—"I'm a piano shifter."

Doctor (recovering quickly)—"Well—er—hereafter shift two at a time."—Exchange.

IMMUNIZATION AGAINST DIPHTHERIA AND SCARLET FEVER WITHOUT SERUM SENSITIZATION

From the clinical observations of Bretonneau (1821) together with the discovery of the diphtheria bacillus by *Klebs in 1883* and its isolation by *Loeffler in 1884* combined with the study of the toxin produced by this bacillus by Roux and Yersin *(1888)* the clinical entity and etiology of diphtheria was established. After long experimenting Behring *(1890-94)* and others found that the serum of animals immune to diphtheria was a valuable remedial agent in the treatment of the disease. Since the introduction of diphtheria antitoxin the mortality of diphtheria has decreased from 55 to 6 per cent and lower. *Trousseau, the father of modern tracheotomy,* popularized this operation and devised the double tube now in use. The high mortality provoked a bitter opposition to this operation which *persisted until 1880,* when *O'Dwyer,* influenced by this high mortality, began his investigations on intubation which resulted in one of the greatest American contributions to pediatrics, namely the *intubation tube.* The next important contribution was the development of the *Schick test in 1913* by means of which susceptible individuals might be detected. About *1895 Babes and Park* independently began the use of injections of toxin-antitoxin mixtures to immunize animals for the production of antitoxin. In 1907 Theobold Smith suggested the possibility of producing immunity to diphtheria in man, which was finally accomplished safely by *von Behring in 1913.* Since that time, especially recently, a rapidly increasing number of children have been *immunized against* diphtheria by the administration of toxin-antitoxin. This procedure sensitizes these individuals to horse serum, and subsequent injections of various serums such as antitetanic, scarlatinal, antistreptococcic and the other serums derived from horses may possibly result in anaphylactic reactions. Several such instances are recorded in the literature. It is advisable, therefore, in administering serums to children previously immunized against diphtheria by injections of toxin-antitoxin mixtures, to attempt to avoid anaphylaxis either by desensitization of the patient by means of an initial injection of a very small amount of serum one hour previous to giving the entire dose, or by adding one c.c. of 1:1000 adrenalin solution to the serum immediately before it is administered. In addition a hypodermic injection of appropriate dosage of atrophine sulphate may be of value in avoiding anaphylactic reactions.

As a result of recent investigations at the University of Minnesota a method is being developed by which children may be immunized against diphtheria and also against scarlet fever without being sensitized to serum. This indeed is a most valuable contribution which promises to enable the medical profession to be able to protect their patients against these serious diseases without rendering them anaphylactic to serum. The advisability of the avoidance of sensitization against horse serum evidently has been recognized by certain commercial concerns who are now using goat

serum in their toxin-antitoxin preparations.—*Minnesota Medicine.*

PHYSICIANS ATTACKED FOR NOT GIVING

A Community Chest speaker at a recent Community Chest luncheon in San Francisco drastically criticized the doctors, among others of the "semi-rich" or "great middle class," for not "coming across" with more money for the "chest." Newspapers quote the speaker as saying:

"It is the big class of professional and semi-rich. It is the lawyers, doctors, dentists and other professional men who send their office assistants out to talk to those who are devoting their time to collect the funds needed to adequately care for San Francisco's needy.

"We should shame these people into giving. If they knew that a list of those subscribing was to be published, they would feel obligated to come across. I become blind with rage when I know the needless obstacles our workers are meeting."

The reaction against this tirade was prompt, widely spread, and the end is not yet. As has been repeatedly published, the doctors of San Francisco and elsewhere as well, give to charity in *service,* figured as nominal value, every year more than the entire collections of the Community Chest. Doctors don't want any special commendation for such helpfulness. It is part of every day's work with every one of them; but they do resent deeply and widely ill-advised criticism of the kind mentioned.

One of the most prominent and most beloved physicians in the city informs us that on the very day that doctors were being publicly attacked at this chest luncheon, he saw nine poor patients in his office, and performed major operations upon two persons, none of whom would ever receive a bill for either medical or hospital services. Incidentally, the hospital thus giving its charity is one dismissed by that notorious Haven Emerson "survey" for the Community Chest as "commercial" and, therefore, by implication beyond the pale. According to the statements of certified public accountants, that hospital rendered free service to the poor last year that cost them over $75,000 to give. Other similar stories of individual and group interests in the welfare of dependent citizens could be told and verified—but what's the use?

The constantly increasing difficulties of raising sufficient funds to carry forward the program of the Community Chest is, of course, apparent to all. The chief reasons ought to be equally apparent to any competent observer. The dangerous tendencies and the reasons therefor should be fairly evaluated, and the policies and methods of the fundamentally fine principle of uniformity in collecting and allocating charitable funds and services be revised accordingly.—*California and Western Medicine.*

Mental and physical deterioration need not be expected to follow the intermarriage of first cousins, according to Murphy (*Jour. A. M. A.,* July, 1924).

Correspondence

THE MATERNITY BILL OR SEVEN YEARS INSTEAD OF FOUR

HOUSE OF REPRESENTATIVES, U. S.

Washington, D. C.

April 6, 1926.

My dear Doctor Neal:

H. B. 7555 known as the Maternity-Child Welfare bill came up for consideration before the House yesterday. This bill was reported out by the Committee and Mr. Parker, the Chairman, moved to suspend the rules and pass the bill.

A Roll Call was demanded but only Fifty-Eight of us were in favor of this which was not a sufficient number to have a record vote. The House was then divided and there were 218 Yeas and only 44 of us voted No. Two-thirds having voted in favor the rules were suspended and the Speaker declared the Bill passed. The Committee before reporting the Bill amended it extending the time to seven years instead of four.

The State of Illinois refused to be bound by this legislation and returned the amount which was apportioned to it on the ground that the state was competent to perform the service for which this Bill provides.

Knowing you are interested in this Bill I thought you might like to know just what had been done.

Very truly yours,

(Signed) LOREN E. WHEELER,
21st District, Illinois.

Note: Mr. Wheeler has been re-nominated and we shall make an effort to again elect him in November.

SOME WAYS TO KILL A MEDICAL SOCIETY

1. Don't go to the meetings.
2. If you do attend a meeting, find fault with the work of the officers and members.
3. Never accept office, as it is easier to criticize than do things.
4. Get sore if you are not appointed on a committee, but if you are, do not attend committee meetings.
5. If asked by the chairman to give your opinion on some matter, tell him you have nothing to say. After the meeting, tell everyone how things should be done.
6. Hold back your dues, or don't pay at all.
7. Don't bother about getting new members. "Let George do it."—*Selected.*

Original Articles

NEPHRITIS*

FREDERICK M. ALLEN, M. D.
MORRISTOWN, N. J.

I hesitated to accept the invitation to address your society on this subject, because of my doubt of having anything new to say at this time. Renal-vascular disease is chiefly chronic, and animal experiments which correctly imitate it must also be extended over a number of years. Clinical cases differ widely in their character and course, so that valid conclusions can be based only on long observations of a large number of patients. The experimental animals must also be numerous and checked by a similarly large number of controls, and this work cannot be carried out with the desired speed and efficiency because merely the accurate routine management of such a large material for such a time creates too heavy a financial burden for anyone not enjoying the support of those great combinations of capital which so nearly monopolize the control of American medical research. Hence it is not possible to announce a new discovery in this field every six months, and this evening's paper will contain nothing that has not been said or published before. In a sense, however, the accusation that one says always the same old thing is a compliment. In this instance the old statements, since the time of their first publication six years ago, have been denied by practically all the authorities on this subject and are still not accepted or applied by the majority of the medical profession. Under these circumstances it is a satisfaction to any investigator to go on stating the same observations, knowing that they are right, that they are steadily gaining wider acceptance, and that the necessity of changing position falls upon those who have been in the wrong. Also the subject pertains to the treatment of the disorders which lead all others as causes of death today, and it is therefore highly important to establish the facts.

The word nephritis is useful as a short name for kidney disease, and fortunately it is still retained in this simple sense by most medical practitioners. The attempt to limit it to an inflammation of the kidney may as well be abandoned. No such line has been drawn precisely between inflammation and degeneration in myocarditis, hepatitis, pancreatitis, retinitis, or most of the chronic changes for which the termination *itis* has been used. I gain the impression that pathologists have only uncertain and arbitrary standards of definition even when dealing with acute inflammation, and that their notions of chronic inflammation are to a far greater extent vague and individual. Nobody yet possesses fundamental biological knowledge of the cause or nature of the anatomical changes in kidney disease, and it is therefore premature to attempt to set up etiologic definitions. Apropos of this is our impression that kidney lesions of the kind heretofore classed as inflammatory have been produced in our experiments by simple dietary overstrain of the function of a kidney remnant. If this tentative observation is confirmed by further experience, it will obviously upset the principal existing classifications of renal diseases.

The intimate association of renal conditions with circulatory conditions has necessarily led to a gross anatomical grouping of renal-vascular or cardio-renal-vascular disorders. The nature of the reciprocal influences is poorly understood, though it seems evident that kidney disease can lead to vascular disease and vascular disease can lead to kidney disease. There is a temptation to carry this division into the histology of the kidney, and distinguish an epithelial group, namely, cases in which the primary or principal lesion is in the secreting renal epithelium, from a vascular group, in which the principal or primary lesion is in the large or small blood vessels of the kidney. There is better success with the recent methods of differentiating between tubular and glomerular lesions, and the concepts of nephritis, nephrosis, renal arteriosclerosis, etc., are winning a justified diagnostic and prognostic status. Nevertheless, authorities seldom agree on the details of classification; mixed cases are numerous; the same case sometimes changes its dominant character with time; and practitioners at large either adopt some falsely arbitrary system or else feel hopelessly confused.

A functional classification seems best to recommend for its practical usefulness to most physicians, because it is definite and has a clear and direct relation to the treatment. The disorders will then fall into two broad groups. In

*Address before the Chicago Medical Society, March 31, 1926.

one group, the important feature is the disturbance of the nitrogen economy, the retention of the waste products of protein. Simple analysis of the blood will demonstrate it, and this demonstration is more important than any nomenclature of nephritis, glomerulonephritis, etc. In the other group, the important feature is disturbance in the economy of salt and water. To this group belong the cases called nephrosis or the nephrotic form of nephritis, or any others which are characterized by edema. Many persons will dispute adding to this same group the cases of hypertension, in which the disturbance of salt and water economy is manifested not by any primary dropsical tendency but by increased resistance in the vascular bed and associated elevation of blood pressure. Nevertheless, this classification is justified by therapeutic evidence. The first group is toxic, and death occurs from true uremia, namely a chemical poisoning by the retained nitrogenous products. The second group might be conceived as osmotic, but as there is no certainty that the disturbance is strictly osmotic, a pseudo-scientific name should be avoided. At any rate, the symptoms and the causes of death in this group are physical or mechanical, due to general or local accumulations of fluid or various circulatory accidents. Obviously there may be mixtures of nitrogen retention with either edema or hypertension, and death may sometimes be due to a combination of true uremia with pseudo-uremia or other physical factors.

The classical conception of all these disorders is that they are self-determined disease entities, running a typical course, some more quickly and some more slowly, but equally inevitably. Even the growing belief that the origin of most or all of the cases lies in an infection, frequently in an acute infection, such as scarlatina, has failed to shake the belief that the disorder, when once established, is inherently progressive and tends to a fatal outcome regardless of treatment. It has always been a mystery why injuries produced by infections or any other methods in the kidneys of experimental animals result either in death or in definitive healing, while the chronicity of the clinical lesions is impossible to reproduce. Much light is shed on this problem by the demonstration of the influence of food in the causation of renal-vascular lesions in animal experiments. I feel some skepticism concerning the interpretation of the lesions produced in some species of normal animals by one-sided diets alone, for the reason that these lesions are apparently not identical with those found in human patients, and the carnivorous diets in question do not seem to represent a demonstrable cause of nephritis in human races or individuals. Nevertheless these experiments have their importance in establishing the principle that renal-vascular lesions can be produced by diet. In our own experiments, we have tried to use the animals which most closely resemble man, and to show that when the kidneys are suitably injured or partially resected, diets high in protein or salt produce the typical symptoms, lesions and progressiveness of clinical nephritis, while these consequences are avoided by avoiding the dietary overstrain of the renal function. It thus becomes possible to understand how chronic kidney disease may follow acute infectious injuries, either immediately or after years of the wear and tear of life. Also a chance is suggested of revolutionizing the traditional doctrine that renal-vascular disease is spontaneously and inevitably progressive.

It is recognized that the conditions in human patients are not as simple as in experimental animals. For example, tissues whose vitality or function is affected by vascular changes may continue to deteriorate merely because the vascular change is permanent, even though all the original causes of the vascular change be removed. There are also numerous theories of continued irritation by cryptogenic toxins from the intestine, from abnormal liver metabolism, and the like. The experimental suggestions, therefore, require confirmation by actual trials in human cases. Our opinion from the clinical studies in the Physiatric Institute to date is that renal-vascular disorders are ordinarily not progressive after removal of the aggravating influences of infection and functional overstrain. Removal of infections means the elimination of those which can be discovered by standard clinical examinations, and there is usually no ground for assuming the existence of any occult source of toxin. Relief of functional overstrain means restriction of the protein and salt intake to the extent necessary to restore normal chemical conditions as respects the blood analysis and normal physical conditions as respects freedom from edema or hypertension. The

damaged organs are still able to bear a surprising degree and duration of functional overstrain. Therefore, so far from deteriorating spontaneously, they ordinarily maintain their function so as to permit indefinite continuance of life if the chemical and physical abnormalities are merely reduced within moderate limits. But when either nitrogen retention, edema or hypertension remains excessive in spite of the strictest dietary control, the severity of the case obviously precludes the desired functional relief, and the progressive aggravation of the condition ordinarily leads to death within a few months or years.

Two qualifications should be added to these general statements. One is that the restoration of normal conditions by artificial stimulation is not equivalent to the result produced by sparing of the function. Hypertension may occasionally be reduced by nitrites, bleeding, bed rest, or the like, with benefit to the extent of temporarily relieving headaches or warding off an impending apoplexy, but it is improbable that the progressiveness is thus appreciably arrested. Also, my personal belief is that cardiac, nephritic or any other edema should be cleared up as far as possible by salt-free diet, and that it is wrong to continue giving salt and depend upon the diuretic action of digitalis, the purin drugs, the acidosis produced by calcium or ammonium chloride, or the remarkably powerful new mercurials such as novasurol and salyrgan. If an edema resists the strictest salt-free diet, it is doubtless better to remove it by these artificial means than to allow it to persist, merely because of the hope of improved circulatory conditions resulting from its removal; but the tendency to progressiveness can scarcely be arrested in the same way by overdriving of function as by sparing of function. The other qualification pertains to refractory cases, which are not always hopeless, because some of them, which seem to resist dietary control at first, show gratifying improvement after many months of continued rigid treatment. This exception applies more to hypertension than to either edema or nitrogen retention.

The medical profession are already convinced of the value of protein restriction for azotemia and of salt restriction for edema. There will probably be a general willingness to credit these measures with at least some influence toward checking progressiveness. If I were to recite a series of histories of patients with the usual albuminuria and casts, together with moderate nitrogen retention or edema, or both, who with careful dietary restriction have maintained excellent subjective health for five or six years with no sign of downward progress, such evidence would not be accepted as proving an arrest of progressiveness, because some cases are known to be benign and relatively stationary in character. Our material is not large enough to demonstrate any general law of non-progressiveness in cases of this group. We are interested, however, in observing how long life can be extended in some cases of extreme severity with the most acutely threatening prognostic signs.

One case is of a man who was first treated in the Rockefeller Institute Hospital for diabetes, and who came two years later to the Physiatric Institute with a severe nephritis superadded. There was edema, hypertension of 190 to 200 mm., blood urea about 100 mg. per 100 cc., blood creatinine of 16 mg. maximum (never reduced below 9 mg. per 100 cc.), anemia to about 2,000,000 red cells, and total blindness from retinitis. With appropriate control of the diabetes, and with salt-free diet and minimum protein allowance for the nephritis, the impending uremia was averted, and notwithstanding his blindness the patient continued active laboratory work as a physicist for two years, when he died rather acutely at his home.

Another example is a woman aged 51, with moderately severe diabetes together with nephritis manifested by edema, hypertension of 220/110, blood urea up to 88 mg. per 100 cc., normal blood creatinine, myocardial impairment secondary to the long standing hypertension, and partial blindness due to retinitis. She had shown marked downward progress since the beginning of her illness years previously, and was in critical condition when received. The diabetes was brought under control by diet and insulin, the edema and hypertension were abolished by salt-free diet, and the blood urea was reduced to normal by limitation of protein to 30 and later to 50 gm. daily. The progress was interfered with by recurrent flare-ups of a chronic cholecystitis. The risk of operation was therefore undertaken, and recovery after the cholecystectomy was smooth and rapid. The patient is now in good condition one year after beginning treatment, and it remains to see how long she can be kept so.

A third patient is a boy of three years, who for the past several months has had nephritis with fever of 100 or 101° of undetermined origin, with edema and serious weakness. He was received in convulsions. The urine contained heavy albumin, casts, red cells, and small numbers of leucocytes. There were no signs of endocarditis, and no discoverable foci elsewhere, so it has been assumed that the infection is in the kidneys. Urinary antiseptics have proved useless. The maximum blood urea was 230 and the maxi-

mum blood creatinine 14.6 mg. per 100 cc. The treatment was by bed rest, exclusion of salt, and limitation of protein to 10 gm. per day with the highest possible quantities of carbohydrate and fat. It has not been possible to reduce the blood urea below 50 or the creatinine below 9 mg. per 100 cc. The edema has disappeared and the child feels well. The temperature remains almost normal now that bed rest has been abandoned and the child is allowed to be out in the sun. The prognosis seems hopeless but the question is how long life and subjective health can be preserved.

In turning to the topic of hypertension, we enter a field of greater dispute. I may say briefly that we consider all the older treatments to have only symptomatic value or none. We are also convinced that the cause is not an intoxication from any product of protein. In this connection it should be noticed that the use of liver extract, which has gained considerable recent publicity, is based on the idea of a toxin derived from protein, and the liver is thought of merely as an organ which is important in protein metabolism. Not only is this theory unfounded and contrary to well established facts (which show hypertension to be unrelated to the protein economy), but also our trials of one of the liver extracts now under investigation have convinced us that in dependable cases under accurate control it does not reduce the blood pressure by a single millimeter. The liver extract is said to neutralize the pressor effect of guanidine, and such a fact merely strengthens the belief that guanidine hypertension is something entirely different from clinical hypertension. Dr. Macallum in a recent discussion deprecated the introduction of liver extract into clinical use before any adequate scientific foundation had been laid for it. It would not be at all surprising if some previously unknown hypotensive substance should be obtained from the liver, but it is fallacious to anticipate that this will have either a causal or a therapeutic connection with clinical hypertension.

In opposition to the traditional prohibition of meats and to any newer speculations of a nitrogenous toxin, I have for some years defended the view that the exciting dietary cause of hypertension lies not on the chemical but on the osmotic or physical side of metabolism, in other words, that it represents a disturbance in the salt and water economy and is most effectively controlled by exclusion of sodium chloride and related salts from the diet.* With seven years' experience and a material of over five hundred cases, I feel now assured of the correctness of this position. Statistics have been previously published, and it need only be added that they continue equally favorable. Figures must vary according to the type of cases comprising any particular group, but the variations are not so great when attention is centered upon those with diastolic pressures in the neighborhood of 120 mm. In addition to these general statistics, the best clinical evidence seems to be furnished by the records of individual cases which were in a stage of advanced severity when received. The three following are examples under long observation:

Case. 552. Female. American. Age 50. Married. Housewife. Admitted April 15, 1921.

Complaint: Occipital headache, nervousness, irritability, and palpitation of heart.

Family history: Mother died at 60 of heart trouble. Father died at 70 of pneumonia. One brother and one sister have tuberculosis.

Past History: Had the usual childhood diseases. Was always in fairly good health, with the exception of chronic gastritis between the ages of 21 and 30. Several Wassermann tests performed during the past six years have been entirely negative. Patient married 14 years; has had three miscarriages. In 1909 had eclampsia, and abortion was performed. She had numerous convulsions with unconsciousness. At that time the blood pressure was found elevated, and albumin and casts were present in the urine.

Present illness: Since 1910 she has suffered from occipital headaches, which come on early in the morning but often persist until late at night and keep her awake. She has had albumin in the urine constantly since 1913, during which time she has suffered from shortness of breath, especially on exertion, and a clutching sensation in the throat. In April, 1915, she had sudden aphasia; was clear mentally but was unable to call the names of objects and her speech was indistinct. She clearly recognized her friends but was unable to call them by name. An hour later she had twitching of the muscles of the right side of the body, followed immediately by complete paralysis. The paralysis was of a temporary nature and cleared entirely after about two weeks. In October, 1915, she had a sudden stroke, accompanied by unconsciousness and convulsions. The blood pressure was found 250/140. She recovered slightly from the stroke at first, but has never regained sufficient control of the arm to use it for writing or sewing. She has felt well with the exception of nervousness, irritability and dyspnea. For the past five years she has been on a closely restricted protein diet and has used principally cereals, vegetables, fruits, butter, bread and cream.

*Allen, F. M. Treatment of kidney diseases and high blood pressure. Physiatric Institute, 1925.

Blood pressures have ranged from 180 to 240 mm. systolic. At no time has she had edema. She has led a life of practical invalidism, the family insisting that she perform no work and that she remain in bed or quietly about the house the greater part of the time. She has been to numerous health resorts in the past five years in order to obtain relaxation. She has gained 30 pounds in weight in the past four years.

Physical examination: Well nourished adult female. Height 5 ft. 4 in. Weight 136 pounds. The skin is clear. The face is flushed and there are a few very fine dilated venules over the cheeks. She walks with hemiplegic gait. There is paralysis of the right arm and leg. The hand remains partially adducted. She is unable to grasp small objects or to hold firmly other objects when placed in the palm. The grip of the right hand is very weak. She has slight residual accommodation. Eye-grounds show definite sclerosis. The terminal endings of some of the arteries are very small and threadlike. There is no choroiditis. Heart is enlarged 2 cm. to the left. On percussion, the left border of the heart is 17 cm. from the mid-sternal line. Increased dullness over the manubrium. Well marked pulsation can be felt in the sternal notch. There is no murmur at the apex. Aortic second sound is accentuated. Blood pressure 226/118. Liver is palpable but not tender. Reflexes of the right arm and leg are increased. Urine shows faint trace of albumin with a few hyalin casts.

Progress in the Institute: Treatment consisted of rigid salt-free diet with unlimited protein, fat and carbohydrate. She was persuaded to eat meat and eggs in normal quantities. She was encouraged to take considerable outdoor exercise each day, instead of the complete rest and avoidance of exertion which had been her former rule. The exercise was graduated so that upon discharge she walked two miles or more about the grounds and was able to climb moderate slopes. The blood pressure gradually fell, and the general strength increased. Dyspnea, although present on exertion, improved markedly during her stay. She complained of palpitation on only a few occasions. Fixation of the urinary concentration is indicated by the fairly constant specific gravity, never above 1013. The urinary chloride fell below 0.5 gm. within 4 days. An elevated output, April 29 to May 2, apparently represented the emptying of some chloride store, and the blood pressure then fell further to 172/100. The patient was discharged May 12, 1921, and advised to take a normal diet, with exception of salt, and to exercise as she desired. She has since remained at home with continued good health and blood pressures similar to those at discharge.

Case 63. This patient is a Jewish housewife, age 59 years. Her parents and probably several other relatives have had hypertension or nephritis.

The personal history is unimportant. She has four living children, and finished the menopause 15 years ago. She has been feeling more and more weak and unwell in an indefinite fashion since that time, but had no diagnosis or treatment until June, 1919, when she became completely incapacitated by dizziness and weakness. The physician who was then called found very high blood pressure, and sent her to the country for a complete rest. As she was no better after several weeks, another physician was called, who continued the rest treatment and also prescribed a very limited, low protein diet. In August the patient returned home and continued to spend her entire time in bed because of dizziness and fainting on attempting to stand. She was first seen in consultation on September 16, when the blood pressure was 220/130. The patient was then transferred to a hospital under the care of another consultant for the purpose of the strictest possible bed rest and diet and drug treatment. October 3, being unimproved, she entered this Institute.

The essential features of the physical examination were advanced arteriosclerosis and senile changes, moderate retinitis, and threatening heart failure. The blood pressure was 240/120. Under strict diet her blood pressure gradually fell to 168 systolic, 136 diastolic. The edema cleared up completely, the result being a loss of weight from 120 to 86 pounds. The physical state changed to one of complete comfort and ability to exercise moderately without difficulty.

In the ensuing years she has mostly adhered to her diet, but it is striking that she has had a return of symptoms whenever she has departed from it. On this account she has been readmitted to the Institute for brief periods four times. Her general progress has been an improvement, so that today she weighs 130 pounds, without edema, maintains blood pressure about 168 systolic and 92 diastolic and enjoys very satisfactory health and endurance.

Case 53. This patient was an American housewife, aged 63 years, with negative family history. She was well up to the time of menopause, then, at the age of 44, began to suffer from attacks of weakness, dyspnea, palpitation and dizziness. These symptoms were similar to those which subsequently accompanied her hypertension, but they ceased at the age of 48 after a dilatation and curettage, and no blood pressure readings were made. In the same year the patient's back was broken in the region of the 12th thoracic vertebra, and she may have sustained internal injuries. She was incapacitated for a year, and slight deformity with limitation of movement remains permanently. A year later she was seriously ill with diphtheria, followed by partial paralysis, passing off after 6 months. About a year later she was ill for three weeks with typical gallstone symptoms; several less severe and definite attacks have occurred since. From that time onward she has been increasingly incapacitated by violent headaches, tinnitus, vertigo, weakness, and palpitation. The diagnosis of hypertension was made 10 years ago, and for the past 5 years the systolic pressure has never been found below 200 mm. and twice during attacks was above 300 mm., while the diastolic pressure has ranged between 120 and 160 mm. She has undergone prolonged treatment with the usual bed rest, drugs, low protein diets, catharsis and bowel irriga-

tions. She has always used salt in excessive quantities.

At her first examination, September 22, 1919, moderate cardiac enlargement and arteriosclerosis and slight retinitis were the significant findings. There was nocturia, and the 24-hour urine volume was between 3 and 4 liters. The blood analyses and renal function tests were normal, except for plasma chlorides of 640 mg. per 100 cc., and a chloride threshold about 610 mg. Salt-free diet without any other change in her habits or place of living gave prompt relief, so that within 3 days symptoms were greatly diminished and the blood pressure remained below 200 mm. By October 7 the pressure had gone down to 144/75. This relief continued most of the time up to 1921, but there were two outstanding peculiarities. First, on the strictest salt-free diet the plasma chloride was generally above 600 mg. per 100 cc., never below 590 mg. per 100 cc. One gram of salt in the diet sufficed to bring back hypertension and accompanying symptoms, but the patient never felt any ill effects from the strict salt privation, unless perhaps a slight lack of strength. Second, she was seriously troubled with indigestion and constipation, and was subject to numerous acute attacks characterized by diffuse abdominal pain, vomiting, intense headache, stupor, and hypertension of 210 to 230 mm. Sedatives, purgation and bleeding were found to be the only means of relief. Finally, in April, 1921, operation was decided upon, chiefly on the basis of the definite gallstone history. The thickened gall bladder was found tightly contracted upon a single cholesterol stone the size of a pigeon's egg, and was removed. Dense adhesions involving the liver, stomach and duodenum were broken up. The patient has since remained free from the abdominal attacks and from hypertension, except for occasional elevations to 160 or 170 with some minor infection such as a cold. She remains a semi-invalid, on account of weakness due to arteriosclerosis and the consequences of her former infections. Her chloride threshold is as high as before, strict salt-free diet is still necessary, and addition of salt to the diet invariably causes a return of hypertension and accompanying symptoms. This condition still continues in this her seventh year under treatment.

In conclusion, we may say that though no case records can be considered decisive in this subject, our clinical experience is at least in harmony with the suggestion derived from the animal experiments, that renal-vascular disease is not ordinarily progressive when functional overstrain and other known aggravating influences are eliminated.

Doctor—"Yes, Sam, you have quite a bad cough, but it will go away soon."

Sam—"Ah knows that, Doc, but what worries me is will ah go with it."

—*Selected.*

RECENT ADVANCES IN UROLOGY*

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It is impossible at the present day to keep in touch with the rapid advances in every field of medicine. One of the objects of graduate courses is to give those who cannot specialize, short "brush up" courses in which various subjects are brought up to date for them. I intend this evening to follow this plan and to direct your attention to a few recent developments in the special field of urology. We will confine our review to advances which would be of aid in daily practice.

Renal and Ureteral Colic. This familiar group of symptoms or syndrome has usually been interpreted to be due in the majority of cases to a calculus which was passing from the kidney towards the bladder. In a small proportion of individuals the syndrome was ascribed to the kinking of the ureter of an abnormally mobile kidney. We now know that there are a number of other conditions which can cause the same colicky or dull aching pain as the two just named. This will explain to some of you why you have been disappointed not to find a calculus shadow or to palpate a "dropped" kidney in such cases. It is true, as we shall see later, that in about ten per cent. of renal and ureteral calculi, their composition is such that they will not cause a shadow on the radiographic film. But even leaving aside these "shadowless" calculi, we now know that a clinical picture resembling in every detail that due to a calculus or an acute ureteral kink with resultant increased intrarenal tension can be due to the following:

(a) Ureteral stricture,

(b) Infection of the ureteral wall or of the renal pelvis,

(c) Renal crises in tabes,

(d) Renal tuberculosis,

(e) Certain forms of chronic nephritis (dolorosa),

(f) Renal tumors with passage of blood clots.

I will not take these up in detail here because we shall do so later. My only object is to direct attention to the necessity of a thorough urologic study in every case of renal or ureteral pain in which you do not feel satisfied that a calculus or

*Read and illustrated by slides before the Kankakee, Illinois, Medical Society, Oct. 22, 1925.

an abnormally mobile kidney is the underlying cause.

Significance of Hematuria. Not so very long ago we were accustomed to believe that when the urine contained blood microscopically in the form of so-called red corpuscle "shadows" that the source was in the kidney. Again that when clots were present and there was an absence of the syndrome just referred to as "ureteral colic," that the source of the bleeding was from the bladder or some other portion of the lower urinary tract. Finally that when the blood was intimately mixed with the urine, that the source of the blood was renal. The sooner we abandon these notions, the more often we will be able to recognize the actual source of the bleeding. It is necessary today to remember that unless we can palpate a kidney tumor or some similar change in the lower urinary tract, it is a neglect of duty towards the patient not to advise a thorough examination with one or more of the modern diagnostic methods, such as cystoscopy, ureteral catheterization, pyelography, etc.

Pus in the Urine (Pyuria). In equal measure as just mentioned, it is fallacious to draw any conclusion as to the seat of infection from the number of pus corpuscles in the urine. I well recall being taught that the presence of certain types of epithelial cells, i. e., those with long tapering ends, indicated a renal origin of the pus. We must drop these notions and learn that the chemical, miscroscopic and bateriologic study of the urine is only one of a number of factors which enter into the making of a diagnosis of disease in the urogenital tract.

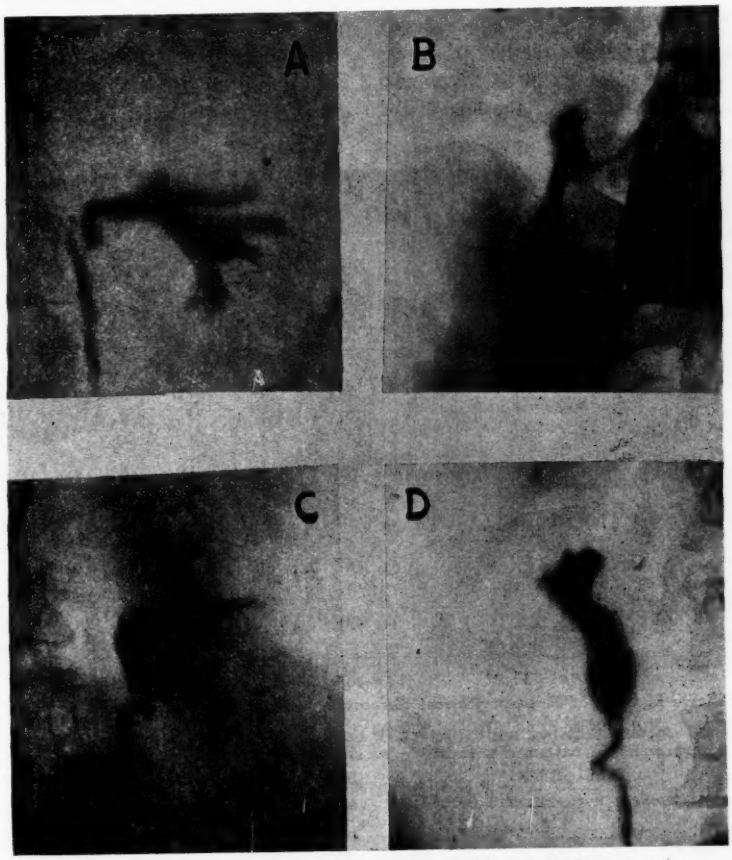

Fig. 1. Pyelograms Illustrating "Filling" Defects

A, from case of hypernephroma of upper half of kidney; B, from case of hypernephroma of upper pole of kidney; C, from case of carcinoma of kidney; D, from case of hypernephroma of lower pole.

Value of Pyelography. Although there is still

some opposition to its routine application, there are many of us who consider it an almost indispensable portion of a complete urologic study. By filling the renal pelvis and ureter with a solution of sodium iodide (12.5 per cent.) and the bladder and urethra with a solution of sodium bromide (25 per cent.) or barium, we are able (with a previous knowledge of normal standards) to detect changes in the contour, location and size of the lumen of the renal pelvis, ureter, bladder and (to a less satisfactory extent) of the urethra which no other method of investigation gives in nearly as complete a manner. I will briefly enumerate a few of the benefits of the employment of these opaque media combined with radiography:

(a) In the differentiation of renal or other retroperitoneal neoplasms from those of intraperitoneal viscera.

This is of great importance to the internist and abdominal surgeon because the justification for "exploratory laparotomy" is rapidly disappearing. In the majority of cases of kidney tumor, there are changes in the configuration of the pyeligram (Fig. 1) which enable one to say that the abdominal tumor is of renal and not of intraperitoneal origin, for example, spleen, liver, etc. If such "filling defects, spider or dragon deformities" are absent, we have a certain small proportion of cases of renal neoplasm in which the pyelogram resembles that of the normal pelvis or of a hydronephrosis. In these exceptional cases we have other findings such as displacement inwards or outwards of the ureter (Fig. 2) or a kinking at the junction of the ureter and renal pelvis.

These exceptional changes are the usual findings in retroperitoneal tumors, for example, sarcoma, and again demonstrate the advances which have been made in a diagnostic direction.

(b) Renal and ureteral calculi.

Ureteropyelography enables one to say whether or not a given shadow is within the renal pelvis or ureter respectively or is an extraneous one. If the shadow is included in that due to the opaque medium, we can say that it (the shadow) is a calculus (or an area of calcification in a neoplasm or a tuberculous kidney). In a similar manner this method enables one to localize the calculus and thus plan the type of operation (pyelotomy, etc.) to employ as well as to visualize the degree of destruction of the renal parenchyma which the caculous disease has given rise to.

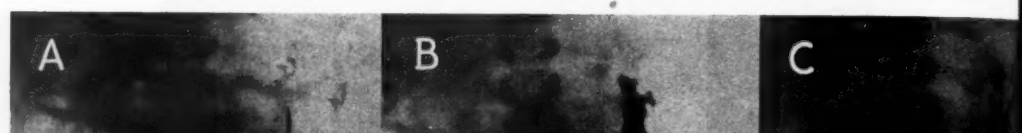

Fig. 2. Three Views in Case of Retroperitoneal Sarcoma in Child of Two, Simulating Renal Neoplasm

A, displacement outwards of opaque catheter; B, normal pyelogram before withdrawal of catheter showi that tumor was extrarenal; C, catheter withdrawn to show how ureter is displaced outwards and kidney rotat

(c) Renal tuberculosis.

Pyelography is of comparatively little value, because none of the changes are characteristic

and there are other methods which are far more reliable.

(d) Hydronephrosis or pyonephrosis (non-tuberculosis).

When there is an obstruction at or distal to the outlet of the renal pelvis we can determine the degree of hydronephrotic atrophy by the degree of dilatation of the renal pelvis or ureter as shown by ureteropyelography.

Similarly when there is extensive destruction of the parenchyma (pyonephrosis) this method is a valuable adjuvant when the question of nephrectomy is being considered.

Ureteral Stricture. Few subjects during recent years have aroused more interest. Although I do not agree with Dr. Hunner as to their frequency, we must concede that a search must be made for the presence of a possible stricture of the ureter in every case of obscure abdominal pain, in cases of recurrent renal calculus or persistent renal infection as well as when a hematuria occurs spontaneously without another cause being found.

The employment of special bulbous bougies is not indispensable. We can secure equally as much information by introducing the ordinary ureteral bougies and supplementing the data obtained by making a ureterogram with the catheter completely withdrawn.

RECENT ADVANCES IN OTHER RENAL AND URETERAL CONDITIONS

Space permits of only a very brief outline of the principal changes in viewpoint during the past ten years in the following:

Renal Tuberculosis (Chronic). This is a unilateral condition during the first two years in the majority of cases. If the diagnosis can be made during this period and the involved kidney removed, the percentage of permanent cures is nearly sixty. The clinical picture is that of a chronic cystitis in such a large number of cases that one should bear in mind that the underlying cause of the symptoms in such individuals is renal and not vesical whenever a case fails to respond to treatment. The guinea pig inoculation test is considered too slow and too unreliable by the majority of urologists.

Renal and Ureteral Calculi. I have already referred to the value of ureteropyelography in confirming the presence of calculi aided, of course, by the use of the opaque catheter. Equally as much progress has been made in the treatment of both renal and ureteral as well as in the question of recurrence.

As to renal calculi, we have learned to employ a very conservative method of operation, namely, pyelotomy. Through an incision into the renal pelvis supplemented as the individual case requires by a small incision (nephrotomy) through the parenchyma, nephrolithotomy has been robbed of many of its immediate and remote unwished for sequelae. We have learned to counsel that only calculi which more or less completely block the outlet of the renal pelvis should be removed. Large coral or multiple large calculi should be allowed to remain or a nephrectomy considered. Through the aid of pyelography and the use of functional tests (such as phthalein and indigocarmin) we can secure a fairly accurate picture of the degree of destruction of a kidney, aided of course by chemical examination of the blood.

In cases of bilateral renal calculi, conservatism should be our guide. We only advise operation when a calculus is so situated as to greatly interfere with the renal function on one or both sides.

Our views as to the causes of formation and the possibility of reformation (recurrence) have undergone considerable change.

The presence of ureteral calculi is not considered an indication for operative intervention today unless certain conditions exist. These are (a) that the shadow is that of a relatively large calculus, for example, more than 1 cm. in width; (b) that there is a severe complicating renal infection with high fever and finally (c) that an anuria is present. Under all other circumstances an effort should be made to deliver the calculus by non-operative means. These involve the dilatation of the ureter and injection of oil or similar substances to facilitate the expulsion of the calculus. By this method we are able to relieve about three out of four cases of ureteral calculi without operation. The latter is not infrequently followed by such a degree of fixation of the ureter and stricture formation that one hesitates to advise operation without having given the nonoperative method a fair trial. We have also learned that there is a close relation between ureteral calculus impaction and stricture formation and one should regard it as his duty to investigate as to the possible presence of such a

stricture of the ureter in every case of ureteral or renal calculi.

Nephritis from a Surgical Standpoint. This is not a new development as both Harrison and Edebohls many years ago called attention to the advantages of decapsulation in chronic nephritis. Since that time the indications for operation have been more sharply limited, so that at present there are practically only two conditions in which decapsulation offers any hope of relief. These are: (a) cases of chronic hemorrhagic nephritis in which the outstanding clinical symptom is severe persistent bleeding from one or both kidneys, and (b) chronic painful nephritis in which pain is practically the only complaint. For the latter group Papin has suggested division of the nerves at the renal pedicle. It is doubtful, however, whether this accomplishes more than the less difficult decapsulation. In all other forms of nephritis, surgery has but little to offer. This is particularly true of the acute nephritides such as one sees after scarlatina, mercury poisoning, etc., as well as in the more chronic nephritides whether they involve the tubules predominating the so-called nephroses or whether they are chiefly glomerular in localization.

The Treatment of Renal Infection. Before closing this bird's eye view of some of the principal recent advances in upper urinary tract surgery let me direct your attention to the changes in viewpoint as to the treatment of both acute and chronic renal infections. We have become more and more conservative and those who remove a kidney today must be ready to show why nonoperative methods would not have accomplished as much without sacrifice of a very important even if paired organ. Through the use of either intermittently or continuously for a period of days to weeks of the ureteral catheter supplemented by internal and local antiseptics, many cases of severe renal infection can be brought under control and eventually cured. This is especially true of the acute cases of pyelitis such as one sees during infancy and childhood, during pregnancy and the puerperium as well as independent of these conditions. It is impossible to describe the technic of application of this principle of combined drainage and lavage of the renal pelvis here because it needs to be modified for the individual case. Suffice it to say that it has completely changed our prognosis in renal infections and that it should be given a fair trial before operative intervention is decided upon.

THE TREATMENT OF ENDAMEBIASIS ESPECIALLY WITH STOVARSOL*

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The resistance and rebelliousness of the endameba to treatment has caused the physician much concern. Ipecac with its derivatives and the organic arsenical compounds usually relieve the symptoms of acute endamebiasis promptly; but the extermination of the parasite is such a difficult problem that it is not infrequently the custom to combat the acute exacerbations without making further attempts to rid the patient of the organism.

In the last five years, I have seen an increasing number of patients in whose stools *Endamoeba histolytica* was identified. Some of these patients were so-called carriers with or without an antecedent history of an attack of dysentery. Others were suffering from the more active phases, often with the amebic ulcerations revealed by proctoscopic examination. In a third interesting group there was an indefinite history of abdominal distress with only very occasional attacks of diarrhea. The fourth group consisted of patients with involvement of the liver; in some the possibility of hepatitis was suggested but in few was there true abscess. In none of the seventy-four cases in this series was chronic arthritis associated, but in view of the observations of Kofoid and his co-workers, this phase should be further studied.

The widespread distribution of the parasite throughout the temperate zone has been recognized for several years. As the clinic draws chiefly on the neighboring states, it is natural that the majority of cases should be in this central northwest portion (Fig. 1). I believe that the apparent increase in patients harboring *Endamoeba histolytica* is due more to careful investigation than to an unusual spread of the parasite.

In a recent article[1] I recorded a clinical study of 533 cases in which the endamoeba was identified. In the present series, all the patients were found to harbor the *Endamoeba histolytica* alone

*Read before the Saint Clair County Medical Society, East St. Louis, Illinois, April 1, 1926.

or in various combinations with *Endamoeba coli, Endolimax nana, Giardia intestinalis, Trichomonas hominis* and *Chilomastix mesnili.*

It is important to bear in mind that by the method used in the clinic a single examination of the stool may reveal the organism in approximately 70 per cent of the cases. By two examinations on successive days the percentage is raised to 90, and by three examinations to 98. Hence, it is advisable to examine at least three stools. In an occasional case in which, although no endameba was found in the stool, proctitis of the endamebic type was evident, scrapings from the bases of the ulcers have revealed the organisms.

Ipecac coated with phenyl salicylate, emetin hydrochlorid, bismuth-emetiniodid, bismuth subnitrate in very large doses, and chapparo amargosa constitute some of the more frequently used drugs. Various types of colonic irrigations such as quinin, isotonic solution of sodium chlorid, and kerosene, have found favor with many workers. Iodo-oxybenzenephyridin sulphonate (Yatren[7]) was prepared in Germany; no patients in this series have been treated with it. The organic arsenical compounds, arsphenamin and neoarsphenamin, stovarsol[6] treparsol[2] and acetylarsan[3] are valuable; the last three compounds are relatively new and originated with the French. Of these three, I have used only stovarsol, and results obtained with this drug constitute the chief subject of this report.

During the last year, I have followed the immediate results of the treatment of seventy-four patients who harbored *Endamoeba histolytica.* This number represents only a small proportion of the cases in which *Endamoeba histolytica* was found.

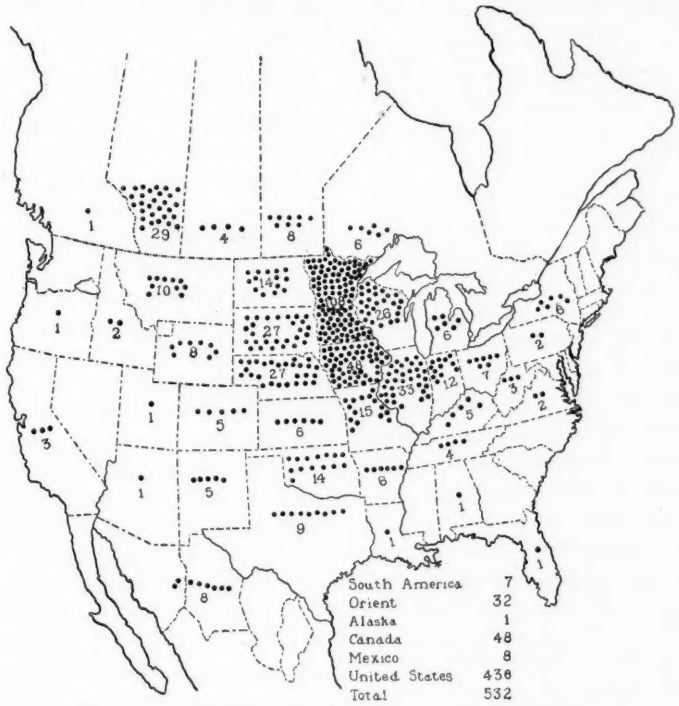

Fig. 1. Cases of endamebiasis according to States.

The first few patients of these groups received varying types of treatment but I wish to refer particularly to those who received stovarsol (Table 1). I scrupulously avoid using the word "cure," since endameba is so tenacious that only in long-observed cases with repeated examinations could cure be determined. Repeated examinations were possible in only a few cases.

It is my custom to give 0.25 gm. of stovarsol three times daily, with meals. The tablet is chewed with the food. This dosage is continued for six days; at first it was continued for seven

days but later discontinued at the end of six for reasons explained further on. After a rest of from ten to fourteen days, I repeat the course, but prolong it to nine days by administering only two tablets daily. This rest interval may appear rather long but it may help to insure complete elimination of all the arsenic and thus aid in avoiding complications.

TABLE 1
COMPARATIVE RESULTS WITH VARYING TYPES OF TREATMENT

Type of Treatment	From Two to Many Negative Stool Examinations, After Treatment, Cases	Positive Stool Examination, After Treatment, Cases	Known to Have Recurred, Cases
Emetin hydrochlorid, 10 gr. Arsphenamin, 3 injections Bismuth-emetin-iodid, 36 gr.	6	0	2
Bismuth-emetin-iodid, 36 gr.	0	1	0
Arsphenamin	1	..	..
Emetin hydrochlorid, 10 gr. Bismuth-emetin-iodid 36 gr.	1	1	..
Emetin hydrochlorid, 4 gr. Stovarsol, 4.5 to 5.25 gm.	1	..	..
Stovarsol, 4.5 to 5.25 gr.	61	2	6

There were sixty-four patients who received stovarsol; one patient, who was suffering from a severe cold at the time she was first observed, received 4 grains of emetin to check the active symptoms and, later, a course of stovarsol.

In sixty-one cases (96.8 per cent of the group of sixty-three in which stovarsol alone was given) there were from two to many negative examinations of the stool after one course of the drug (Table 1). In twenty-two cases, in which there was associated ulcerative proctitis of the endamebic type, the healing was practically complete within from eight to ten days after the beginning of treatment. In this group of sixty-three, there were five cases in which further tests were possible from six to eight months after cessation of all treatment. In each of the five from three to four negative stool examinations were then obtained.

In contrast with those out of eighty-five patients,[1] who received a month's course of treatment consisting of from 12 to 18 grains of emetin hydrochlorid, chapparo amargosa by mouth and kerosene irrigations of the colon, the examination of the stool was negative on completion of the course in only 41 per cent. However, it must be noted that the subjective symptoms were nearly always relieved and this figure, 41 per cent, relates only to the negative examinations of the stool. Further types of treatment yielded negative stools in from 58 to 70 per cent.

There is every reason to expect recurrence in more than six of this group of sixty-one cases; yet the ease and facility of treatment, there being no hypodermic injections and no colonic irrigations, together with the saving in time and expense, more than justify the utilization of a drug such as stovarsol. Treparsol and acetylarsan may be as efficacious, and further reports on the use of these drugs will be awaited with much interest.

The six known cases of recurrence illustrate three interesting points: First, if the disease recurred it was usually within from two to fourteen weeks. Second, in four of the six the use of stovarsol was repeated with only temporary improvement or none at all; this emphasizes the importance of using some other drug when the disease recurs, either a member of the ipecac group or possibly yatren. Third, in five of the six recurrent cases ulcerative amebic proctitis was present. In another series[1] the disease recurred in ten out of nineteen cases in which there was ulceration. These are both very small groups, yet it would seem to indicate that the possibility of recurrence is much greater in cases in which there is gross ulceration of the lower bowel. However, the disease was known to recur in only 23.7 per cent of the ulcerative cases in which stovarsol was used as compared with almost 50 per cent of those in which a combined course of emetin was given (Table 2).

TABLE 2
CASES WITH AMEBIC ULCERATIVE PROCTITIS

Type of Treatment	Examination of Stool Negative		Recurrence	
	Cases	Percent	Cases	Percent
Stovarsol	17	77	5	23
Emetin course	9	47	10	53

In my experience with stovarsol, only two complications have arisen. On account of the close relationship of stovarsol to the arsphenamin group, I was watchful for such complications, such as gastro-intestinal disturbance, toxic erythema and exfoliative dermatitis. A few patients complained of increased flatulence and slight nausea, but in no case was there any vomiting or diarrhea. In the group of sixty-four cases in which stovarsol was administered, toxic

erythema appeared in four (6.2 per cent). In these four it was noted that the symptoms seemed to appear suddenly on the seventh day of treatment. It may also have been purely coincidental that each patient had suffered from acute upper respiratory infection one or two days previous to the onset of the erythema. For the last six months I have withheld stovarsol if acute upper respiratory infection was manifested, and always limited the first course to six days (eighteen tablets). Under this regimen toxic erythema has not occurred. Possibly further cases will occur but they should be less frequent. Only two of the four patients were ill enough to remain in bed and the complicating symptoms disappeared within a week. One of the patients suffered a recurrence of diarrhea and proceeded to take stovarsol without medical advice. The erythema reappeared.

Johns and Jamison reported two cases of toxic erythema in a group of forty-six cases, and I have received several letters reporting similar experiences. Three other patients who suffered recurrences were so benefited by their original two courses of stovarsol that they purchased the drug and kept it on hand. One man took more than seventy tablets, at the rate of from four to six a day, without apparent injury to himself, and, as he persisted with the drug, the endameba likewise became indifferent to it. This re-emphasizes the value of interrupted treatment in preventing the organisms from becoming emetin-fast or arsenic-fast.

The amount of arsenic given in one course of stovarsol (4.5 gm.) is about 1.4 gm. This is a much larger amount than the patient receives with arsphenamin or neoarsphenamin, which is given over a period of from four to five weeks.

In five injections of arsphenamin, there would be about 0.7 gm. of arsenic and in five injections of neoarsphenamin from 0.5 to 0.6 gm. of arsenic. However, the so-called nonspecific effect of the complex organic molecule may be more important than the amount of arsenic. The valence of the arsenic may make a difference. Arsphenamin and neoarsphenamin contain trivalent arsenic while stovarsol as well as treparsol have arsenic in the pentavalent form.

In a series of twenty-three cases in which arsphenamin or neoarsphenamin was given either primarily or after recurrence following treatment with emetin, the results were apparently favorable in eighteen (78 per cent). This is to be compared with sixty-three cases in which stovarsol was given; apparently favorable results were obtained in fifty-three (84 per cent). Certainly, time and expense favor the use of this newer arsenic compound, although the physician has been more than thankful for the older organic arsenicals.

CONCLUSIONS

1. The wide distribution of *Endamoeba histolytica* must be appreciated by both physicians and public health authorities.

2. Emetin continues to be an invaluable drug in the treatment and seems to be particularly effective in rapidly controlling most of the acute phases of endamebiasis.

3. The organic arsenical compounds would seem to be more effective in eradicating the parasite than are ipecac and its derivatives.

4. The possibilities of cure depend more on persisting with varying types of treatment rather than on any one drug.

5. From a small series of cases of ulcerative amebic proctitis, the indications are that recurrence is more likely in this group than in those without gross ulcerative lesions.

6. Much is yet to be desired in the treatment of the persistent and chronic phases of the disease.

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NEWS FOR TIN PAN ALLEY

Some late song hits are:

"Her Birthday Cake Was Heavy, but the Candles Made It Light."

"My Horse Never Misses the Sunshine, Because He's Used to the Rein."

"Bring the Potato Masher, There's a Fly on Baby's Head."

"We Feed the Youngster Onions, so We Can Find Him in the Dark."—*The Watchword.*

THE ROENTGEN RAY AS A REMEDY IN FIBROIDS AND OTHER GYNECOLOGIC DISEASES*

MARY ELIZABETH HANKS, M. D.
CHICAGO

Introduction. Clinical conclusions are more or less valuable according to accuracy of diagnosis, experience in the application of therapeutic principles and a determined follow-up method in estimating end results. Successes and failures each bring their quota of knowledge.

In this paper the attempt is made to survey the work of nine years, totaling 374 cases. As you know this is a difficult thing to do and of necessity must be less absolute than a report covering a short period of time. A part of my data has already been presented in papers read by me before other societies. There is, then, no attempt to do more than to bring my cases up to date, to restate evidence that is becoming to me more and more conclusive and to add recent observations. The nine years have convinced me, first, that x-ray is the remedy indicated in selected cases of benign pathology in the generative organs of a woman; and second, that the technique usually employed with the lower voltage is that to be preferred.

Technique. In x-ray therapy, as many of you know, there are two distinct methods of application. The first is the short wave-length, the massive dose, from a high tension machine with a capacity of 150,000 to 250,000 volts; the entire dose delivered usually at one or two sittings. This technique is highly suitable to cancer. The second method consists of a smaller dose, and is delivered usually from a lower voltage machine with a capacity of 120,000 to 130,000 volts. This technique is a more deliberate one. The treatment may be given in series with intervals of three weeks at first, later four, six, eight weeks or even as many months. The number of treatments varies according to the nature of the pathology and to the requirements of the individual case.

This latter technique gives abundant time for readjustment, and is, I believe, the safest and most satisfactory practice in benign cases, for the following reasons:

1. While the pathology in hand is favorably influenced, neighboring tissues are not injured.

2. The prostrating "Roentgen sickness," which usually follows the massive dose, will not occur, especially if the ray can be confined to the pelvis and if the digestive tract is excluded.

3. Detrimental blood changes do not take place.

4. Secondary sex characteristics, such as obesity, asexuality, etc., do not appear probably because the ovary is affected only as to ovulation, not as to endocrine output.

5. The tissue changes are slower. If the menopause does result, it is not so precipitate, nor so stormy.

If the goal is a temporary amenorrhea, as is desirable in younger women, the effect on the tissues may be limited after the pathology has been sufficiently influenced.

Dr. Newcomet of the Presbyterian Hospital, Philadelphia, emphasizes the same principles and he seems to have proved that in benign cases the small dose may be applied remedially to women of 30 to 35 years of age, and that the menses may be disturbed only temporarily or not at all. Dr. Newcomet employs a dose still less than mine, and believes that if mild doses fail, heavy ones will.[1] Dr. Knox of New York, St. Luke's Hospital, states that even younger women from 25 to 35 years of age after amenorrhea for two or three years may resume menstruation.[2] Recently in four of my own cases of fibroid uteri, in younger women, a temporary amenorrhea was produced, the pathology remedied and the menses normally resumed in six months, nine, fifteen and twenty-four months. I believe childbearing is possible in such cases. A fifth case, upholding this belief, conceived and bore a normal child at full term.** So it is evident that sterilization is not always necessary. The younger woman is more likely to resume menstruation than the older one.

The massive dose in benign cases has been steadily declining, especially during the last year. Thus the following words of Holzknecht and Béclère uttered three or more years ago were well nigh prophetic.

Holzknecht, the pioneer roentgenologist, one of the most constructive students of the massive

*Read before Chicago Medical Society and Radiological Society Dec. 16, 1925.

**Two more cases have reported since writing this paper.

dose, after years of scientific study and observation, says that it is only in cancer that the massive dose is indicated or necessary. He observes that in a few individuals who failed to complete the series of treatments "half or less of the ovary dose was sufficient to stop menstruation. Therefore," he concludes, "we do not have the right to destroy more in the care of a single case than is physiologically warranted."[3]

Béclère states, "The very penetrating rays are a new advance but are not always necessary, not always harmless and not always efficacious."[4]

My detailed technique follows:

Spark gap: 23 centimeters (9 inches).

Distance: 18 to 43 centimeters (12 to 17 inches).

Five milliamperes.

Three to 5 millimeters of aluminum and sole leather as filters.

Time of exposure is from 14 to 17 minutes, through as many ports of entry, 8 to 13 centimeters (3 to 5 inches) in diameter, as are required to cover the pathology under treatment.

There is a general agreement that the requirements of the tissues we are discussing are all below 100, the unit skin dose.[5] The ovary is about one-third or less, while the glandular tissues and fibromyoma cells are all below 100.

General management. In the conduct of each case herein reported the most important points are careful diagnosis and prognosis, selection, detailed records and attention to individual needs as they occur. Comparative examinations are made during and after the course of treatments. Subsequent to dismissal examinations are made when possible, and reports from the physicians referring the patient are sought. A large majority of the cases submitted have had confirmatory diagnoses made by other physicians.

Fibromyomata. The pathology most frequently presented to the gynecologist for x-ray treatment is fibromyoma. In the selection of these cases the roentgen therapist lays the foundation for his success or failure. For practical purposes, all cases submitted fall into three well-defined groups; first, those which should be rejected because of definite contraindications presently to be stated; second, those which should be accepted with guarded prognosis, which for various reasons may yield only partial success; third, the hemorrhagic intramural fibroids, which are highly suitable for this form of therapy and which yield excellent results.

The first group, those unsuitable for x-ray, usually present one or more of the following conditions.

Contra-indications:

1. A tumor associated with acute symptoms, such as sudden severe anemia, much tenderness, fever and chilliness, may be, for example, necrotic and is at once surgical. Here should also be included cystic and other degenerative changes.

2. A tumor associated with large ovarian tumors (not simple follicular cysts) belongs to the surgeon.

3. Pedunculated tumors should be operated upon if the pedicle is slender and there is danger of torsion.

4. A case associated with acute gonorrheal infection is not benefited by x-ray nor yet harmed. Later, however, the adhesions and the thickened tissues of the chronic case may be much benefited.

5. A suspicion of malignancy puts the case into the hands of the surgeon, or the high voltage expert, or the radium therapist, or all of them.

6. Submucous tumors if diagnosed early would better undergo curettage, at least, as they are apt to be disappointing. Two of my cases that came to operation had submucous growths. Béclère's[6] seven failures in 700 cases all had submucous complications. Since it is probably true that at least 10 per cent of all fibroids are complicated by submucous growths and since less than 2 per cent. fail to respond, it seems fair to conclude that about 8 per cent., even of the submucous type, are rendered innocuous, if not cured.

7. A large non-vascular tumor, made up mainly of connective tissue, does not yield the best results, although when it is reduced in size and the menopause established, health and comfort usually follow.

8. A woman who desires children and whose subserous tumors can be enucleated, is a good subject for myomectomy. At the Mayo Clinic, out of 488 cases, 44 became pregnant after the operation. This is 9 per cent.[7]

Inability to recognize these eight contra-indications has led to three of my failures. The first was a myxomyoma, a rare occurrence. This

woman, after four series of x-ray, was operated upon. The second was a stromotogenous tumor of the ovary occupying the median position. There was from the beginning a difference of opinion as to suitability for x-ray. Three series decided the matter and the case was operated upon. The third was a case of cancer of the fundus in a very delicate woman. The tumor had been pronounced benign after a diagnostic regime in the hospital. Operation was refused. This case did not improve under x-ray and later died. However, a careful roentgen therapist will remember that any tumor not materially reduced after two or three series belongs to the surgeon.

Experience convinces me that size of tumor should not occupy too important a place in contra-indications. Large tumors conforming to favorable type often yield satisfactory results. Even those growing to the umbilicus have entirely disappeared; on the other hand, one the size of a full term pregnancy was reduced to one-quarter its original size, when improvement ceased and operation was advised, though refused, and at last accounts the woman was in good health.

Neither is the question of age urgent if the small dose is employed as indicated in a former paragraph. I have had 31 cases under 40 years of age, 17 were 35 or less, and the youngest 30.

The second group consists, as above stated, of those cases that may not yield results entirely satisfactory and yet may properly belong to x-ray therapy. Women who are not good surgical risks, those with heart or kidney diseases, or hyperthyroidism, or arterio-sclerosis, or other serious complications, belong to this class. In some of these cases the health can be so improved and the pathology so far remedied that an operation is later possible. I have had four such cases. For example, among my series were two large multiple tumors which would count as failures were it not that before x-ray treatments the patients could not with safety have been operated upon. Later, because of improved health and reduced pathology hysterectomy was done safely and successfully. In other cases, however, surgery will probably never be possible. To these women the roentgen therapist can offer a lessening of acute symptoms and a definite relief not obtainable through any other method. Other women who might be put into this group are those who cannot turn aside their business or their home duties for hospitalization, or who refuse to submit to surgery. These should be given a choice of procedure after a full understanding as to prognosis, if x-ray promises a relief of symptoms and a probable return to health.

The third group, fortunately about 75 per cent. of all cases, is made up of the hemorrhagic intramural fibroids. When these are situated below the umbilicus, are not seriously complicated and occur in women of 40 years or more, they are ideal cases for x-ray therapy, yielding almost 100 per cent in good results.

The effect of x-ray on pathologic tissues. The explanation of such gratifying statistics is to be found in the histological study of pathologic tissues subjected to x-ray.

1. In the fibroid tumor cell the nuclei first show hypertrophy, then the chromatin coagulates, is diffused and may be displaced into the protoplasm. Later vacuoles occur and the nuclei are obliterated. Finally the detritus is carried away by the leucocytes and young connective tissue takes its place.[8]

2. In the ovary x-ray inhibits ovarian stimulation, probably by its effects on the ripened follicles, then the ripening follicles, then the primordial follicles, and last, if the x-ray is continued long enough, the interstitial tissue.[9]

3. The internal secretion is apparently not influenced at all or not until much later. X-ray may be discontinued before the hormone producing tissues are affected. It need rarely be continued until they are detrimentally influenced.[10]

4. In the blood vessels x-ray produces an edema of the endothelial lining of the capillaries, which causes an endarteritis obliterans, thus limiting the too abundant blood supply.[11]

5. It has been repeatedly demonstrated that the x-ray has a direct influence on glandular tissue. The enlarged cystic utricular glands soon become less in size and function, thus contributing to the increasingly normal picture in the endometrium. The same change occurs in the glands of the cervix uteri. In short, x-ray produces in the ovaries, blood vessels and glandular tissues conditions that prevail in the normal menopause.

Histological studies in uterine hemorrhage.

Changes in the last two, the blood vessels and the glandular tissues are pertinent to the explanation of the success of x-ray in the treatment of hemorrhage, whatever the cause of the hemorrhage may be, excluding cancer. Samuel Geist has proved by his histological studies that the one characteristic finding in cases of hemorrhagic fibroid is hypertrophy of the mucosa; in uterine hemorrhage without gross lesions hypertrophy of the mucosa with edema of the stroma and enlarged, sometimes tortuous, almost always cystic glands are found.[12] This pathology is exactly that remedied by the roentgen ray, as has been shown above. Geist also reasons that the theory of endocrine disturbance is upheld because either the removal of the ovaries or x-raying the ovaries will cause a disappearance of both the hypertrophy of the mucosa and the hemorrhage.

Anemias. The anemias associated with intractable hemorrhages from any cause group themselves, practically speaking, into two general classes, those that are due directly to the loss of blood, and those complicated by focal infections. The former promptly improve with the cessation of hemorrhage. The latter may even resemble pernicious anemia and present symptoms out of all proportion to the hemorrhage. Recovery is slow and incomplete unless focal infections are eliminated.

Hemorrhage of the menopause. No type of case has given me more satisfaction in its reaction to treatment than hemorrhage during the menopause. Menopausal symptoms that are more or less exaggerated, usually occur in about 60 per cent. of all women. In about 25 per cent., symptoms occur which interfere with normal activities, and may drive a woman to the physician. Hemorrhage is not uncommon. The cases of so-called "essential hemorrhage" have long been said to be without pathology, and as such are usually classified. But with a large, boggy uterus, or with an indurated uterus, or with hypertrophy of the mucosa, so often found by Dr. Geist, above quoted, I am inclined to think of them as mildly but distinctly pathologic. However this may be, the hemorrhage is more easily controlled at this time than at any other, because Nature co-operates. The gradual application of moderate doses of x-ray is almost specific and can be discontinued soon. To date, those I have treated have responded to x-ray therapy and have remained well.

The troublesome menopause, whether hemorrhagic or not, that is prolonged, nerve-racking, with its familiar train of distressing symptoms, should be terminated by x-ray. The generative organs at this time so readily assume the characteristic atrophic state that very little x-ray usually suffices.

Hemorrhage in adolescents is usually a systemic problem, probably of an endocrine nature, in many cases, as Novak sets forth.[12] These girls, in my opinion, need nothing so much as to be well studied. As a last resort, if either x-ray or radium is necessary, let it be radium—applied with great wisdom. Several convincing reports have come in about cases cured by radium.[13] But the ovarian tissue in the young is highly susceptible to both x-ray and radium, and there may result a permanently amenorrhea or an incomplete development.[14]

In addition to the conditions above described I have treated the following pelvis pathologies with x-ray.

Ovaries. The simple follicular cysts of the ovary which originate in the Graafian follicles; also blood cysts of the corpus luteum, are promptly modified or cured by the x-ray. These retention cysts are rarely large, the largest in my series being about the size of a lemon. In all cases under observation, 54 in number, they either rupture or recede and others do not form. Cystadenoma has occurred in two of my cases long after x-ray treatment was discontinued. These cases are not prevented nor caused nor benefited by x-ray and are at once surgical.

Cervicitis. In nonmalignant diseases of the cervix, such as degeneration of cervical glands and erosions, proliferating and even destructive in nature, x-ray is a dependable remedy. The accompanying leucorrhea gradually disappears. Some of these erosions have been chronic and threatening, and these are often potential cancers. But if they are thoroughly irradiated before malignant changes occur, their response to treatment is prompt and satisfactory. To date, only one such case has shown signs of recurrence. This was due to insufficient treatment because of her youth. Twenty-six of my 57 cases recovered promptly during x-ray treatment of a fibroid. Fifteen complicated the case more or

less obstinately, but finally recovered completely. Seventeen were treated for cervicitis alone.

Dysmenorrhea. Another very satisfactory group is made up of uncontrolled dysmenorrhea that has resisted surgery and many other measures. X-ray should here be employed even in younger women. In these, fractional doses and longer intervals between series, will sufficiently delay the menopause so that the shock is negligible. All of my cases, 16 in number, have shown excellent results. They should, however, be selected with unusual care.

Adhesions. Chronic adhesions, indurations and inelastic tissues following old inflammations have long been known to yield favorably to x-ray which promotes a free reparative circulation. Such modification of tissues will release a tumor which earlier has been adherent.

Displacements. It is a recognized fact that the uterus naturally inclines to the normal position.[15] When it is released from adhesions and when it is reduced in weight, it may assume the normal position unaided. This I have repeatedly seen, even after a fibroid has borne the uterus down for an extended time. X-ray has also proven itself a valuable remedy for the heavy engorged uterus, and in proper cases of subinvolution which often lead to displacements.

How does x-ray affect a woman sexually? This is a natural and legitimate question often asked me.

Even after the question of procreation is eliminated, the sex impulse and perfect function should be seriously conserved as an important factor in the harmony and contentment of family life. Later in life, ovulation is of much less importance than established sex habits and mental poise. According to Bride, of London, total hysterectomy disturbed sex relation in 39 per cent. of his cases.[16] Fear and psychic instability are prominent symptoms after radical operation. If a woman fears that a mutilating operation will influence her sexually, that function is often impaired. If, on the other hand, she knows that her generative organs are intact, as after x-ray, this consciousness favors normal sex life. My women successfully treated with x-ray are usually unchanged sexually. In some cases there is even improved sex health because of better general health, no fear of conception and freedom from discomfort and pain during coition.

Malignancy. Of my entire series not one completed case has to my knowledge developed either sarcoma or carcinoma. This fact seems to favor the belief that roentgen therapy through the establishment of normal circulation and the relief of the pathology present, helps to prevent the development of cancer by remedying the precancerous state. To substantiate I quote E. Essen Moeller,[17] who reports 700 operations for myoma followed by the development of 22 malignancies. This is 3.14 per cent in cases operated upon. On the other hand, Franque[18] reports roentgen treatment of 200 myomata, followed by malignant degeneration of only one. This is 0.5 per cent. If x-ray has no advantage over surgery, Franque would be entitled to 6¼ cases of malignancy instead of one.

Cullen (of Johns Hopkins)[19] finds carcinoma of the cervix in one per cent. of the myoma cases, and of the body of the uterus, complicated with myoma, 2 per cent adenocarcinoma. According to various estimates at least six should have developed cancers in my series of 221 cases of fibromyoma. But to my knowledge not one has developed. Neither has any developed in my 153 miscellaneous cases which includes 57 cases of cervicitis.

If it is true, and it seems beyond contradiction, that x-ray therapy is a safeguard against malignant degenerative changes, the uterine fibroid causing no symptoms should be treated by x-ray before pressure symptoms develop and malignant processes are encouraged.

Comparisons. A fair statement of my reasons for the preference of roentgen therapy in the treatment of benign gynecologic diseases should be made. One principle pre-eminently conducive to the success of any treatment is selection of cases. When, then, upon examination, a pathology is discovered that is suited to x-ray, surgery and radium seem to me contraindicated for the following reasons:

First: In experienced hands the danger of x-ray to life is negative, while radium in the hands of the best radiologists may be followed by serious results if old inflammatory processes

exist.[20] And surgery even in the most skillful hands, yields an admitted mortality.

Second: Roentgen ray can be successfully applied without loss of time, inconvenience or discomfort, and without hospitalization, an economy much appreciation by the patient.

Third: The roentgen ray covers a wider field than radium, is more inclusive of possible pathology, stimulates more actively the circulation of lymph and blood and does not result in trauma of the endometrium.[21]

Fourth: The larger tumor is more successfully reduced by x-ray than by radium.

Since, as we have long contended, the roentgen therapist should observe carefully contra-indications for x-ray and should put the case into the hands of the surgeon or the radium expert, is it not fair to expect that they should be equally careful in observing contra-indications for surgery or radium. If such precision were more frequently exercised, many women would be saved from unnecessary mutilation and the nervous instability which often results.

Burns. The danger of burns is one of the most serious and most common charges brought against x-ray. During my nine years I have had no accidents nor burns, therefore, I assume they can be avoided.

Conclusions. My experience in the treatment room, corroborated by many roentgen therapists, brings me to the belief that x-ray in the hands of a physician with diagnostic and clinical experience should hold an important place in the armamentarium of the gynecologist.

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UNUSUAL UNUNITED FRACTURE OF THE HUMERUS OF 40 YEARS STANDING*

ROSS EDGAR HUNT, M. D.

BELVIDERE, ILL.

This case is reported because of its extreme long standing, its peculiarities of function, and the plate of the case which are quite interesting.

H. X. N., a farmer now by occupation, age 64 years, suffered a serious accident at the age of 24, 40 years ago, while working in a woolen mill. While attempting to adjust a broad machine belt, his left arm was caught in the same, and he was thrown across the room against other machinery. Examination at the time showed three ribs on the right side broken in two places each, a fracture of the right clavicle about one inch from the distal end, the right axilla badly injured, the skin torn and exposing both the anterior and posterior muscle walls of the right axilla and the inferior surface of the head of the humerus, the capsule being torn, and two fractures of the right humerus. The first was an oblique fracture about 2½ inches down from the head and the 2nd a transverse about 1½ inches above the elbow joint. The axilla was sutured, the two fractures (humerus) reduced and a roller bandage only applied with the use of a sling. On the third day wooden splints were used and on the sixth day upon dressing marked infection was evident. The next day the upper oblique fracture was purposely rebroken because of a slight overlapping, reset, and a plaster cast applied. Infection continued necessitating the removal of the cast and the application of wooden splints and frequent dressings. The wound finally healed. The ribs united and the lower transverse fracture of the humerus knit and became strong, as also did the clavicle, but the upper oblique fracture did not knit and it was evident that the two ends were far from being in the slightest apposition. A leather shoulder harness was worn for fourteen years, during which time the man worked and learned to make his right arm of some value to him. After fourteen years the harness was discarded.

It is noteworthy that twenty-five years after the first accident he suffered a second one in a runaway at which time he fractured six ribs, all

*Read before Boone County Medical Society.

of which knit in due time, showing that there was no pathological reason for non-union of the upper oblique fracture which was still ununited, most probably due to the presence of muscle between the two ends making apposition impossible.

At present after forty years standing, physical examination reveals a robust man of sixty-four years of age, engaged in active farming. The right arm is three inches shorter than the left. The distal end of the upper fragment points posteriorly and towards the axilla. Both ends can be felt as being smooth, and it is evident

Fig. 1. Radiogram showing an ununited fracture of the humerus after 40 years standing resulting in but little impairment in the use of the arm.

that the two ends overlap nearly two inches and are about one inch apart. Both axillary walls are intact as are the deltoid and biceps which are very well developed. No crepitation may be determined between the bone ends. He uses the arm as a flail; anterior and lateral rotation is impossible but he can throw it in the intended direction. His grasp of the hand is powerful, his pulling and lifting strength excellent. He demonstrated his lifting ability before the writer by grasping a one hundred pound sack of grain on the floor with both hands and lifting it shoulder high. Lifting as much with the injured member as with the well; a seemingly Herculean task with such an ununited fracture.

Therefore it is evident there is muscle between the two ends and that there is some manner of fibrotendinous band extending between the two ends not determinable in the accompanying radiogram, which holds the bones firmly enough to lift objects of considerable weight. He refuses surgical intervention now after forty years, stating that he is able to carry on his sixty acre farm in his present condition.

MEDICAL TREATMENT OF PEPTIC ULCER*

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The purpose of this talk this evening is to present to you in a somewhat chronological order some of the various treatments that have been proposed in the care of the disease in question. Every practitioner has some particular favorite manner of handling ulcer cases. Every now and then he will be called upon to treat some particular individual, who for some reason does not respond to the chosen method. It is therefore a good plan to have up your sleeve one or two extra regimes, or if not this, at least to have some modifications ready to be used in case of necessity.

There is one thing that is common to practically all ulcer cures; that is rest in bed, insisted on probably first by Cruveilhier.

What we are aiming at in ulcer cure is well summed up by Walter Wolff as follows:

1. Avoid mechanical irritation of the ulcer (improper food).
2. The food must be of such nature as not to stimulate secretion.
3. The food should be able to combine with the acid in the stomach.
4. The food must be of such nature as to furnish ample nutrition.

Contrary to the opinion of gastroenterologists of a former generation, it is advisable before taking up any regular regime, to institute one, two or three days of fasting (or rectal feedings if you will) and then to proceed with the regular treatment.

In fact, even without the presence of hemor-

*Read before the Englewood Branch, Chicago Medical Society, March 2, 1926.

rhage, a period of starvation is quite beneficial and this is especially true in case there has been much pain or vomiting. The *Leube-Ziemssen's* cure (or, as it is usually called the Leube cure) allows for ten days in bed. The entire treatment is outlined as follows:

I. (a) Hot moist applications to the abdomen continuously.

1. Flaxseed poultices continuously from ten to twelve hours during the day.

2. Priessnitz applications at night.

II. (a) After the ten days in bed, the flannel is worn around the abdomen during the day with continuation of the Priessnitz applications at night.

(b) After the ten days rest in bed two hours rest after each chief meal.

III. (a) Carlsbad water (Schloss or Muehlbrunnen). This water is taken luke-warm (not hot) over a four weeks period, the amount being 250 cc. (or if the gastric acidity is very high 500 cc.) taken a half hour after breakfast in small swallows, allowing ten or fifteen minutes for the entire drink.

5. After five weeks add roast veal, especially cold, souffles, rice sago, ½ glass of pure wine.

6. All foods, after eight or nine weeks, starting on each one slowly.

A few years after Leube brought out his treatment *Lenhartz* of Hamburg suggested that it was a better plan to feed the ulcer patient earlier in order to have him build up his nutrition thereby supposedly to give the ulcer more healing power.

The following are the chief points in this treatment:

I. Concentrated proteid foods, to combine with the excess of HCl.

II. Increase the diet rapidly so as to build up the general strength and well being of the patient.

III. Avoid distension of the abdomen by using rest in bed, ice bags, bismuth internally, giving milk and other fluids, only in small amounts, furnishing by preference eggs, etc.

The following charts represent in detail the diet of the Lenhartz treatment.

Day after last hemorrhage	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Eggs	2	3	4	5	6	7	8	8	8	8	8	8	8	8
			Beaten				4 Beaten 4 Cooked				Maximum			
Sugar	...	...	20	20	30	30	40	40	50	50	50	50	50	50
Milk	200	300	400	500	600	700	800	900	1000	1000	1000	1000	1000	1000
		Iced.	Fed by spoon											
Raw Scraped Beef	...	...	...	...	...	35	2x 35	2x 35	2x 35	2x 35	2x 35	2x 35	2x 35	2x 35
Rice	...	...	...	...	...	...	100	100	200	200	300	300	300	400
Zwieback	...	...	...	...	...	...	...	20 1 piece	40	40	60	60	80	100
Raw Ham	...	...	...	...	...	...	...	...	...	50	50	50	50	50
Butter	...	...	...	...	...	...	...	...	...	20	40	40	40	40
Calories	280	420	637	777	955	1135	1588	1721	2138	2478	2941	2941	3007	3073

IV. Diet. (a) Three chief meals are allowed and two intermediate meals.

1. Ten days. Cooked milk, bouillon, unsweetened Zwiebach or cake soaked in one of the drinks.

2. Seven days. To diet No. 1 is added slightly thickened soup, rice, sago, cooked soft in milk. Raw or soft eggs, boiled calves brains, young chicken or squab (without fat or skin).

3. Five day period. Added to diet No. 1 and No. 2 the following: Boiled calves feet, scraped raw ham, scraped rare beef, potato puree, a little tea or coffee.

4. Added to diet No. 1 No. 2, No. 3, the following: tender roast beef and roast chicken or squab, venison, partridge, macaroni, a little white bread.

Frank Smithies has outlined a method of treatment differing considerably from others. The following are the chief points in this method:

I. Rest in bed. Physical and mental rest from one to three weeks.

II. Physiological rest to the effected part (stomach). According to Smithies "complete rest demands avoidance of food, *per orem,* irritating medicines, gastric lavage, frequent abdominal examination of this infected focus."

III. Local applications to the abdomen, "Painful spasms are prevented by having constantly applied to the abdomen compresses saturated with a hot solution of alcohol and boric acid. These compresses may be kept heated with an electric pad or partly filled water bag

and should be worn day and night without interruption."

IV. Keeping the stomach empty of food. "Abstinence from food by mouth should be insisted upon for from three to seven days, according to the type of patient under care." During this fasting period he allows the patient to chew paraffin wax for ten minutes every hour, the idea being to keep the mouth clean chemically, as an aid in counteracting the development of painful hunger contraction and hunger spasm, allaying thirst, and preventing parotitis and prompting a free flow of saliva and mucus.

V. Rectal feedings. During the fasting period, 300-600 calories of nutrient mixture are given each twenty-four hours in about 1000 cc. or normal salt solution. The enemas consist of one ounce of 50% alcohol, one ounce of glucose, and normal salt solution to make 240 cc., given by the drop method, the rate of flow being 30-60 drops a minute and allowing at least four such enemas in 24 hrs.

VI. Mouth feeding. Usually begin on the third to fifth day.

1. Nourishment should be liquid and administered warm, in small quantities and given frequently.

2. Carbohydrates should be selected.

The feedings are begun with 2-4 ounces of warm liquid nourishment each waking hour.

VII. The food used is a liquid carbo-hydarte mixture, (barley water, rice gruel, thin cream of wheat, dextro-maltose, ovaltine, malted milk, thin creamed vegetable soup, etc.) "Milk is not given as routine." He advises that if milk is given at all that it must be first par-boiled, citrated or pre-digested. Smithies is heartily opposed to the use of alkali in the treatment of ulcer.

VIII. Administraton of Medicines. These are used with the following indications:

1. Painful gastro-spasm.

2. Stimulation of over acid gastric contents associating with peristaltic unrest.

3. Pain associated with perforation of ulcer.

The author of this method believes that the first discomfort is overcome by the treatment mentioned above, in particular chewing the paraffine. Occasionally belladonna or bromide is given. For the relief of the over acid gastric juice soda is not given but preference is given to milk of magnesia or calcined magnesia.

4. For the relief of the pain of perforating ulcers, morphin may be necessary and of course the use of surgery is demanded in case there is an actual breaking through of the peritoneum.

Coleman has brought out a method of treatment that differs radically from all other forms. By this method the carbohydrates may be given by rectum.

The enema. 30 grams of glucose is dissolved in 300 cc. of physiological sodium chloride solution and this is given perhaps from a vacuum bottle by the drop method at a rate that allows about 30-45 minutes for this amount. Three or four of these are given daily, equally spaced throughout the sixteen waking hours. Coleman states that the average patient will tolerate about 10% glucose and some will take as much as 12% and some will not be able to tolerate more than 7%. These are started on the first day of the treatment. Also every morning a cleansing enema of soap suds or sodium chloride is given.

II. Food by mouth. This is begun on the fourth to sixth day, the only food permitted being the white of egg and olive oil or butter fat. The two foods are given at different times, in order to prevent the delay that fat causes in the passage from the stomach. The intervals between feedings should be as long as feasible and should not be less than two hours. The quantity of food should be increased as rapidly as the stomach can take care of it in order to avoid loss of weight. The total amount of food at each feeding should never exceed three ounces and it does not always reach this amount. Olive oil is the fat usually chosen and is given in the amount of 1½ to 2½ ounces the first day. It is given clear and is taken more easily when it is chilled. The whites of three or four eggs may be given the first day thoroughly mixed with a quantity of water or whipped to a foam or lightly coddled. The quantity of oil is increased gradually to five ounces and the total number of egg whites to six or eight. If variety is desired the yolk of egg may be substituted for the olive oil or butter fat in the proportion of one yolk to about one teaspoonful of oil or butter. However the yolk and the white of egg should not be given at one time. The yolk may be heated but should not be cooked hard. A little sweet butter and salt may be added. Occasionally a patient will rebel against all fats mentioned and

cream must be substituted for this. In this case twenty-three ounces of cream are required to replace the five ounces of olive oil. The cream is said to be less desirable because "it calls forth a weak gastric secretion, and is not capable of exerting the same demulcent action on the surface of the ulcer." The diet is continued for three or four weeks and as is common to all diet cures, especially selected foods should be allowed for many months.

Purposely the Sippy treatment has been left to the last. This is not because it belongs here chronologically but rather because it is desired to give this more consideration as it is probably the most popular method of treatment.

This method, first published in 1911, has for its foundation an accurate neutralization of the gastric juice.

The treatment consists of the following points:

I. Rest in bed for approximately three weeks. After this the patient is allowed to sit up a short while each day and take short walks. A longer period of rest may be indicated by peri-gastritis; local peritonitis, hemorrhage, etc.

II. Diet.

(a) First three weeks.

1. Feed every hour from 7 A. M. to 7 P. M.

2. Three ounces of mixture of milk and cream, equal parts, at each feeding.

3. After one or two days, soft eggs with cracker or bread and butter may be added to one of the forenoon feedings and three ounces of a well cooked cereal such as rice, oatmeal or farina, to be added to one of the P. M. feedings (the cereal is measured after it is prepared).

4. Gradually egg and cereal are added until at the end of the first week the patient usually is taking each day three ounces of the milk and cream mixture every hour and in addition two or three soft eggs (one at a time) and six to nine ounces of the cereal (three ounces at one feeding). The cereal and egg are given alternatingly and at the same time (and in addition to) three ounces of milk and cream mixture.

5. Custards, cream soups, purees and other soft palatable foods may be substituted now and then for the milk and cream feedings.

6. Jellies and marmalades may be gradually added if desired.

III. The patient should be weighed. If desired a sufficient amount of food may be given to cause a gain of two or three lbs. each week.

IV. Diet after the third week.

1. The routine is changed to three small meals a day, (Breakfast, dinner and supper) with milk and cream at hourly intervals.

2. The total bulk of food at one meal should not exceed ten or fifteen ounces (300-450 cc., measured after prepared). Water, tea and soup are not estimated in the amount of food allowed.

3. The three small meals should consist of food of the same character as prescribed above; vegetables in purees may be used, potatoes prepared as desired but thoroughly masticated, cooked fruits, all ordinary desserts and, after a few weeks, raw fruits of wide variety may be added.

4. Meat and meat broths interfere with the results of the stomach and stool analysis; however, usually subsequent to the fourth week, a small quantity of meat may be taken if desired. At breakfast, bacon is always allowed. This regime is carried on the remainder of the treatment.

V. Medicinal treatment (ant-acids).

1. A powder is given every hour, alternating with the feeding; for example, feed at seven o'clock, powder at seven-thirty; feed at eight o'clock, powder at eight-thirty. Also, the powders are given every half hour after the last feeding for four or five doses, or until the stomach contains no food, as determined by the use of the tube. The powder is stirred up in a glass containing from one to three ounces of water, immediately before taking.

2. The powders are two varieties:

a. Sodium Bicarbonate.
Heavy Calcined Magnesia, aa 10 grains (.6 gram).

b. Calcium Carbonate 10 grains (.6 gram).
Sodium Bicarbonate 30 grains (2.0 grams).

c. In case the bowels move too frequently, powder a may be replaced by powder b; however, as far as possible the two are to alternate.

3. When the free acid of the stomach is found controlled late in the afternoon and just previous to taking a powder or a feeding, the acidity is likely to be controlled at all other times during the feeding hours. However, if it is not controlled by the usual amount, the dose is gradually increased by adding five grains of calcium

carbonate to each powder until the acidity is regularly found controlled. It should be remembered, however, that a few cc. of fluid containing HCl removed half an hour after the last powder is taken does not necessitate the addition of alkalis, as the stomach has emptied itself of all foods (the few cc. mentioned is normally found in the fasting stomach).

4. Aspiration of the stomach one-half hour after the last powder, to determine whether or not the acidity has been controlled. This is done three evenings a week. This is discontinued at the end of the fourth week, providing there is no pyloric obstruction and in case the tube shows that the stomach is practically empty a half hour after the last powder.

5. The same plan is carried out when the patient returns to his regular occupation. Three small meals are taken daily and in addition to this the milk and cream mixture is taken along to the place of business. The mixture is carried in a thermos bottle and another flask may be carried containing water for the powders, or if he finds it more convenient he may take the powders with a swallow of milk. Now and then the patient may try taking an ordinary full meal or for a time three ordinary full meals. After each ordinary full meal, one powder should be taken each half hour for six doses, or two powders at the end of each hour for three doses.

6. The powders are stopped for five days at the end of ten weeks and then resumed as before for five or six weeks. They are stopped again for five or six days and then resumed again for six weeks. During the five days when the powders are not taken, the frequent feedings should be continued.

VI. Ambulatory treatment. It is a question whether a patient is ever justified in undergoing an ulcer treatment without being in bed at least a part of the time. There may be an occasional patient for whom for one reason or another it is not expedient to go to bed, but surely this is rare and not to be recommended.

It has been suggested in these cases that the patient take bismuth subnitrate, about 10-15 grams stirred up in a half a glass or more of water, on an empty stomach, one-half hour before arising in the morning. He is then to recline on the right side for this length of time. In addition to this, a bland diet is advised and some form of ant-acid given after each meal.

Another plan of treating peptic ulcer should be mentioned at this time; that is "Transgastric" Method. A duodenal tube is passed and after the bulb has gone beyond the pylorus, feedings are instituted at regular intervals. The disadvantages of this method are several. It is at least unpleasant to have during a period of weeks a tube in the pharynx. It is also a question as to how much mechanical irritation may be caused by this piece of rubber in contact with an ulcer of the stomach or duodenum. It would seem also that a more or less serious objection is that we are pouring into a very sensitive organ (small intestine) food that has not been properly prepared by a sojourn in the stomach.

There are, however, several advantages. In case an individual is much under weight, it is possible by this method to immediately give enough calories to start him on the upgrade.

Inasmuch as the patient is being well nourished and the stomach is presumably at rest by this method it would be possible to have the patient wholly or in part ambulant.

Naturally there are marked restrictions in regard to the variety of foods given. They must be liquid so as to pass through the rather small tube. This means practically milk and cream, to which eggs and sugar may be added.

It would seem wise to strike here a warning note in regard to a vitamine-poor diet carried out over a long period.

On more than one occasion the writer has seen scurvy develop and on this account during recent years has administered orange juice at least in small amounts early in the course of treatment. In addition to the out-and-and scurvy, we must keep in mind that a patient may have various degrees of vitamine defficiency, which, although not sufficient to give outward manifestation, may be still enough to injure the healing process of an ulcer.

Before closing, the following statements might be made:

1. This has been an attempt to give in concise form the various kinds of treatment for peptic ulcer.

2. The method advocated by Sippy is probably the most popular in America and in the hands of the writer seems to give the best results.

3. There is a growing tendency to advise laparotomy in all cases of gastric ulcer (except

in a patient so young that malignancy is very improbable), as it is impossible to differentiate between gastric ulcer and carcinoma.

4. An ulcer which has not been cured by one thorough medical treatment is probably not amenable to medical therapy.

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OBSERVATIONS ON THE TREATMENT OF FRACTURES*

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Any discussion of the subject of fractures may seem trite and out of place, but when one considers that despite the immense number of cases treated, the poor results number some ten per cent., and further that even among men noted for their interest in and study of fractures, differences of opinion prevail, there is justification in examination of this subject and in efforts to standardize and disseminate such ideas which have proved to be of value.

Formerly the classical treatment embraced the following points: 1. It was generally advisable to defer reduction until the subsidence of swelling; 2. immobilization continued until firm union had occurred; 3. scanty or no attention to the care of the soft parts—the skin, nerves, vessels and muscles.

As will be seen, the general principles of modern methods are considerably different. Moreover it is to emphasize that each fracture is to be considered as an individual problem and not as a member of a class. The exercise of judgment is required in each case, not only in the early treatment, but throughout the entire conduct of the case.

In the large majority of fractures the periosteum is not completely ruptured. At one point or another the fragments are attached by intact strips of periosteum. Earlier writers, attributing an osteogenetic function to the periosteum attached more importance to the role of this "periosteal bridge" than really exists. Modern conceptions of the role of the periosteum are well summarized in the words of Hey Groves[1] when he says: "The periosteum is chiefly a limiting membrane of bone. The dense bone can live, grow, undergo repair, and produce fresh periosteum after the latter has been removed. In young bones it is possible to remove the periosteum in such a way as to produce an osteogenetic membrane, this being probably due to the lifting of the epiosteum with the periosteum. In adult bones, this is impossible, except after trauma or inflammation." The periosteum is of value as a "nutritive vascular membrane" for the bone receives its blood supply partly through the vessels of the periosteum.

Fracture cases are emergencies. Ashhurst[2] said: "The more promptly reduction of the fragments is secured, the easier it will be to obtain anatomical reposition. Especially is this true in joint fractures and in children. If attempts at reduction are delayed until swelling of the soft parts has reached its maximum, or until it begins to subside, they are not apt to be successful, and the mere fact that the broken bone has been restored to its normal form is very frequently enough to prevent injurious swelling of the soft parts from developing."

Having reached the suspected fracture as soon as possible, the surgeon makes a careful preliminary examination. The guiding principle of this examination is not to do any unnecessary manipulation or cause any unnecessary pain. The purpose of this examination is merely to determine whether or not a fracture exists or probably exists. The more accurate diagnosis is made later by the x-ray and palpation under anesthesia. Most frequently inspection and history alone suffices to make the diagnosis and in this case no further examination should be made but preparations for the care of the fracture should at once be started. Inspection failing or doubtful, the very gentlest palpation is resorted to. With a very light touch abnormal positions of the bones are estimated and the centers of the maximum pain are located. Vigorous manipulation is not only unnecessary but is harmful. If crepitus is not incidentally elicited special effort to produce it should never be made. The advent of the x-ray has rendered obsolete the elicitation of crepitus as a diagnostic sign in fractures. Should inspection and palpation fail to make a positive diagnosis and there is still reasonable grounds for suspecting a fracture the part should be submitted to roentgenographic examination. The preliminary examination should also note the possible existence of

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dislocations or nerve injuries. A dislocation is even more of an emergency than a fracture and should be reduced with all possible expedition. Following the preliminary examination if there be a wound, this should be given the first aid treatment of an antiseptic, and a sterile dressing. No attempt should be made at this time to thoroughly cleanse the wound or shave the skin. If any delay is necessary an ice-bag should then be placed over the fracture.

The problem of immediately moving the patient to the hospital is now taken up. Any method which prevents movements of the fragments and gives the patient the minimum of discomfort is advisable. Very often a patient will be found with the broken arm resting on a pillow. The patient frequently may be moved to the hospital with the arm still resting on this pillow. More commonly a padded wooden splint is very gently applied, if necessary without removing the patient's clothing. The humerus may be bandaged to the side of the body. A Thomas splint is of course desirable for fractures of the femur or leg bones; failing this a padded splint reaching from ankle to axilla in the case of the femur and from ankle to hip in the case of the leg. Fractures of the pelvis or spine should be handled with extreme care not to move the patient; a firm stretcher or mattress and spring being useful.

There may be considerable shock in connection with the injury and this should be treated if present before starting to the hospital. Lowering of head, external heat, fluids, whiskey, etc., are useful.

Immediately upon arrival at the hospital a careful x-ray in two planes should be made. Even if the fracture is obvious it is important to do this for purposes of record. Landsman[3] says: "It is held that the absence of a roentgen-ray examination of a fracture is, per se, basis for a malpractice suit, and recovery of substantial damages is the rule in such neglect."

The surgeon after examining the x-ray makes preparation for the immediate reduction of the fracture. Should the patient request to see the x-ray it should be shown him.

Reduction of a fracture is obtained by (a) massage or (b) manipulation under anesthesia (rarely without) or (c) extension or (d) open operation.

Lucas — Championnière, whose dictum was "movement is life," was the pioneer in the treatment of fractures by mobilization and massage. The development and details of this system as evolved at St. Thomas Hospital, London, is most interestingly described by Mennell in his book entitled "The Treatment of Fractures by Mobilization and Massage."[4] By the term "glucokinesis" is meant a painless stroking massage which is so smooth and light as to have been likened to a mesmeristic pass. The rate is ten to twenty times to the minute and the direction that of the venous flow.* The site of the fracture is avoided. The advocates of this method are able painlessly to reduce many cases of Colles' fracture after fifteen minutes of this almost hypnotic massage. Splints are used for safety's sake and this specialized type of massage is employed for twenty minutes daily. The results of this method in the hands of Mennell are far superior than those of the average in the British Fracture Committee's report. The following table from Grove[1] shows how striking is the comparison.

Description of Fracture	Incapacity		Total Disablement	
	Fracture Committee Report	Mennell	F.	C. R. M.
Colles'	Average=17 weeks	50%=4 weeks 95%=8 weeks	14%	0
Neck of humerus	Average=27 weeks	Average= 7 weeks Longest=11 weeks	10%	0

Lack of training in this method and inability of surgeons to give the necessary amount of time to it, makes this method practically unavailable in this conutry.

The usual method of fracture reduction is manipulation under anesthesia. Immediately after the preliminary x-ray and as soon as possible after the fracture, the patient should be completely anesthetized. The purpose of the anesthetic is not only to obviate pain but to obtain complete relaxation of the muscles whose spasm otherwise would greatly interfere with if not prevent the reduction. The manipulations under anethesia are to be done under the guidance of the fluoroscope. They must be done with exceeding gentleness to minimize trauma to the soft parts. The limb should be put in such a position as will take the pull off the muscles[3] as for example flexion of the hip and knee in fractures of the femur. A frequently useful pro-

cedure is to flex acutely the fracture so as to lock the edge of one fragment over the other and then to extend.

Many fractures, particularly oblique and comminuted, fractures of the long bones will not yield to these methods in which case recourse is had to methods of reduction by extension and suspension. The principle of this method is to produce a continuous, strong, steady pull on the distal fragment in the long axis of the bone and corresponding counter traction on the proximal fragment. The mechanical details of the various devices to bring this about are involved and their description would take too long for a paper of this scope. The best writings on the use of Thomas and other splints with skin and skeletal traction are probably those of Jos A. Blake.[5] Reduction by extension is checked and controlled by x-ray examinations taken at frequent intervals by the portable machine.

A certain very small percentage of fractures cannot be reduced without an open operation. The size of this group (at present some ten per cent. of all fractures) should be considerably smaller than it now is, and certainly can be reduced by the more intelligent and more patient use of the methods of manipulation and extension.

Grove[1] feels that if satisfactory reduction is not obtained after ten days' effort, operation should be resorted to. He is more conservative than Lane in the matter of asepsis and considers it permissible that the glove finger enter the wound. The fragments once aligned in the open operation, are fixed by one of numerous methods each having its advocates. Lane plates, Parham bands, wires, nails, boiled beef-bone intramedullary pegs, living grafts and other methods have their uses according to the type of fracture. It must be observed that the open operation even with the best technique is not a guarantee of a good functional result.

It is of the utmost importance to try to establish what constitutes a good reduction. In 1912 a Fracture Committee of the British Medical Association analysed 1736 non-operative and and operative cases.[6] They found that where the anatomical reduction was good that the functional result was good in ninety per cent. of the cases and, on the ohter hand, that if the anatomical result be bad the functional result was bad in 53 per cent. of the cases.

They conclude therefore, that, "although the functional result may be good with an indifferent anatomical result, the most certain way is to obtain a good anatomical result. No method, whether non-operative or operative, which does not definitely promise a good anatomical result, should be accepted as a matter of choice."

It is well known that certain types of anatomical displacement are generally accompanied by good functional results. It becomes a nice question of judgment as to what type and amount of displacement shall be allowed to go untouched. Provided the longitudinal axis of the fragments is undisturbed, and the general alignment is good, considerable lateral displacement is permissible. In fractures of the femur in children a mere hooking on of the edges so that twenty-five per cent. of the two fragments is in contact will generally bring about a good result. One may be satisfied with a closed reduction of this kind if manipulative efforts to produce a better have failed. A second type of permissible displacement is in the impacted fractures without angulation.

Displacements which are not permissible are (a) those which shorten length by impaction or overlapping in the bones of the lower extremities. (b) Those which increase length, as the distraction of the patellar or olecranon fragments. (c) Angulation of the fragments of the shaft of long bones. (d) Lateral displacements near joints. (e) Displacements of rotation. Hey Grove[1] says that "displacement is of serious omen in proportion to its proximity to and influence upon a joint."

Once a satisfactory reduction has been obtained the proper means of maintaining it must be decided upon. The guiding principle here is the use of such splints or apparatus as will hold the fragments in position and at the same time preserve the full vitality of the circulation and the neuromuscular apparatus. They must further admit of ready and frequent inspection of the extremity distal to the fracture. Moreover, no splint or retentive apparatus should be incapable of adjustment to accommodate the swelling which often follows reduction. Circular plaster casts should be used with greatest caution. The cast enclosed limb should be elevated and frequently palpated and inspected, and the patient questioned as to the extent of pain.

Often it is advisable to split the cast immediately, converting it into a bivalve.

Boorstein[3] decries the use of the flat wood splint which he says cannot accommodate itself to the rounded contour of the limb. In the hands of the writer, properly padded wood splints have given excellent results. Anterior and posterior moulded plaster splints are comfortable and valuable. The cockup splint, the aeroplane splint, and the Thomas leg and humerus and arm splints have their appropriate uses.

In April, 1922, there gathered at the Massachusetts General Hospital a conference of most of the country's eminent fracture specialists in an effort to standardize the treatment. The result of this conference was the publication[7] of a schematic tabulation of the treatment of fractures. This table covers very completely nearly all fractures and represents the consensus of opinion as to what constitutes the most approved treatment as to reduction, splints, times of immobilization, physiotherapy, etc.

Reduction and proper splintage accomplished, a second x-ray examination is imperative to insure that the reduction has not been interfered with in the application of the splints, and to serve as a permanent record that the work has been done satisfactorily. If the position, as shown by this second x-ray is unsatisfactory, reduction must be attempted a second or even a third time until a satisfying result is obtained.

The immediate after care of a fracture is rest to the patient and extremity, and the application of an ice bag to the fracture. Sedatives if necessary for pain are given. Severe compound fractures are given tetanus antitoxin.

Passive and active motion of the joints adjacent to the fractured bone is instituted as early as possible—the third day in Colles' fractures. Massage of the Mennell type and muscle kneading type is also employed very early. Heat in the form of a therapeutic lamp, baking, electric pad, hot water, or diathermy is useful in accelerating the return of joint motion.

The active use of the muscles in the splints is encouraged and as soon as they are removed, exercises are prescribed which employ the joints and develop the muscles. Forcible, painful, stretching or violent massage are never employed.

X-ray examinations are made from time to time during the convalescence to check the maintenance of position and to observe the progress and strength of callus formation.

In cases with delayed union the entire body should, if possible, be exposed to the ultraviolet ray and there should be the addition to the diet of small amounts of calcium and phosphorus.

The case of fractures is exceedingly interesting because of the great diversity of problems presented, the frequent occurrence of situations requiring the exercise of judgment, and the responsibility which has to be assumed.

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COLDS: INFECTIVE CATARRHS*

(Abstract)

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The condition known as the common cold is the most prevalent ailment about which the medical profession is consulted. To the laity, sneezing, running nose, headaches and sore throats seem so trivial and unimportant that they are considered as necessary evils to be endured rather than to be cured. The mildness of the disease together with the absence of a fatal termination probably accounts for this attitude.

The reduced resistance following a siege of so-called "cold" predisposes the patient to more severe infections such as pneumonia, influenza, rheumatism, neuritis, tuberculosis, etc.

He and Dr. Hawley have decided to write a number of short articles on this subject, and if permitted by the Program Committees, present them during the ensuing season. Their paper tonight covers a survey of current opinions on the causes and methods of propagating the common cold, especially emphasizing systemic conditions that make for a predisposition.

*Address before North Shore Branch Chicago Medical Society, October, 1925.

First, a sound nervous system is of the utmost importance as its vasometer system depends upon its sympathetic nervous system and any defect in the stability of this system would interrupt its normal functions and destroy its purpose.

Second, a system free from septic poisons. Septic poisons circulate in the blood and are found in various parts of the body. The commonest sites are the accessory cavities of the nose (sinuses), the gums, teeth, tonsils, urinary tract, kidneys, intestinal tract, and in fact, all mucous surfaces.

Third, microorganisms. Staphylococcus, streptococcus, pneumococcus, influenza bacillus, catarrhal bacillus, diphtheroids and cocci are found in the mucous membranes of the throat as harmless germs but by some change, as yet unknown, become dangerous enemies to the system.

Fourth, hygiene. Until people learn to lead more healthy lives generally and especially improve their nervous equilibrium and thereby, the stability of their vasomotor system, chills and infection and infective catarrhs will remain with them. Open windows alone will not defend them. The "open air life" advocated by all health authorities is practised by only a very small percentage of the public, notwithstanding the constant and continuous publicity campaigns of boards of health. It seems greater efforts must be put forth to spread this preserver and giver of health. A normal functionating body radiates a happy, satisfied and contented disposition. Nevertheless at present, people live their lives surrounded by the "cold" catchers who repeat the same story: "I sat in a draft;" "I got my feet wet;" "I got my knees wet;" "I changed my underwear." The individual having no focal infections, or if he has nature has had time to furnish antibodies to subdue their ill effects, exhibits a resistance or immunity which assists in stabilizing his vasomotor system. Add to this his more regular habits, his non-coddling, out-of-door life, becoming accustomed to cold and draught, his nervous system becomes strengthened and there is a total absence of brain fag. His nerve force is more stable. It is not being rushed about from one part of the body to another, as is the case with city workers who use their brains actively for a time, then rush all their nerve force to the digestion of a too hurriedly eaten lunch, then send it back to their heads and then to their legs to catch a train and so on.

One might easily ask why he should give his time to the study of a problem of so great obscurity, but other questions of equal obscurity have been solved before and it is our duty to the millions of sufferers from this tormenting thing to keep eternally at the work of stalking it to its lair.

DR. C. W. HAWLEY had planned a lantern slide demonstration but the lantern was not available. A good deal is known about the transmission of a cold by sneezing but in his opinion every sneeze does not mean a cold. In some cases a sneeze is caused by a sensitive membrane.

Another method of transmission that is little thought of is through the handkerchief that is carried in the pocket or in a lady's bag. The germs are transmitted to other articles and in turn to other people.

The etiology has been investigated by all the bacteriologists in an effort to find some specific germ for the common cold but the result so far is nil.

DISCUSSION

DR. FRANK J. NOVAK said that in his opinion a hyperplastic ethmoiditis was the basis of about 80 per cent. of all common colds. Treatment of these head colds should be directed toward the condition causing this hyperplastic ethmoiditis.

DR. G. B. LAKE said that one essential in the treatment of these head colds is general elimination. Patients with poor elimination are more apt to contract colds than those not thus affected.

DR. C. E. M. FISCHER said he was glad Dr. Hawley laid emphasis on the handkerchief. The late Dr. Gehrmann was very much impressed with this means of transmitting colds. He referred to the chlorin treatment and said that investigations showed it was an efficient treatment, although the newspaper publicity against it had discouraged many people from trying it.

DR. C. H. LONG, in closing, said that the hyperplastic ethmoiditis referred to by Dr. Novak was only one phase of the cause of colds. For instance, one will get a chill that has nothing to do with the nasal condition, have muscular pains, and yet not have this ethmoiditis.

What Dr. Lake said in regard to general elimination is in line with the paper.

Regarding the chlorin treatment, a paper is soon to be published giving the results of the investigations along this line. The authors have had no more suc-

cess with this method of treatment than with anything else.

DR. C. W. HAWLEY, in closing, said that the general condition of the body was responsible for the bacterial invasion producing the head cold. In his own case, for thirty-five years he has been taking a Turkish bath once a week to keep his skin in as good condition as possible. He finds as a result of this that brisk walking, producing perspiration, standing or sitting in a draught will not cause him to take cold.

AN INVENTORY*

MATHER PFEIFFENBERGER, M. D.
ALTON, ILL.

Osler wrote: "For countless generations the prophets and kings of humanity have desired to see the things which men have seen, and to hear the things which men have heard, in the course of this wonderful nineteenth century. To the call of the watchers on the towers of progress there has been the one sad answer—the people sit in darkness and in the shadow of death. Politically, socially and morally, the race has improved, but for the unit, for the individual, there was little hope. Cold philosophy shed a glimmer of light on his path, religion in its various guises illuminated his sad heart, but neither availed to lift the curse of suffering from the sin-begotten son of Adam.

"In the fullness of time, long expected, long delayed, at last science emptied upon him from the horn of Amalthea blessings which cannot be enumerated, blessings which have made the century memorable; and which have followed each other with a rapidity so bewildering that we know not what next to expect.

"Wonderful in themselves as these discoveries have been, their great value has been in their usefulness to man. In no branch of science have greater advances been made than in preventive and curative medicine."

Knowledge has taken the place of guesswork; experiment has pushed empiricism and superstition into the background; medicine grew from an art into a science. Through the epoch-making discoveries of Pasteur and the host of earnest workers the world has produced since, the human family began to receive benefits like it never had received before.

The causes of the decimating diseases of the world were studied one by one, until now there is hardly an infectious disease that has not been conquered by the scientific world.

The economic value of these conquests is incalculable and the public hardly realizes what has been done in its behalf, so gradual has the accomplishment taken place.

The medical profession, from its training, is not prone to let the public know its discoveries and advances; and the public, having no other way to find out other than from the profession, still lives on in ignorance.

We know, as physicians, that modern science has made possible the conquest of rabies, smallpox, yellow fever, typhoid fever, cholera, typhus and bubonic plague—that is, methods have been devised for their eradication.

Although we pride ourselves on the work we have done to reduce the mortality from tuberculosis, the United States Public Health records show that 30 per cent of all deaths between the ages of 15 and 60 are due to pulmonary tuberculosis. Rosenau estimates that this disease alone costs us (the United States) about $500,000,000 annually.

Of the 21,500,000 children in our schools today, almost 2,000,000 will die later of tuberculosis if the present rate continues, based on the assumption that 10 per cent of all deaths are due to consumption. Are we, as a profession, doing all we can to check this enormous loss?

In many respects the venereal problem is a greater menace in its many manifestations, early and late, than tuberculosis. Syphilis is the primary cause of approximately 10 per cent of all deaths. Against 87,000 cases of tuberculosis reported in seventeen states in 1920, over 154,000 cases of gonorrhea and syphilis were reported.

Stokes believes that the annual cost of insanity due to syphilis alone would approximate $500,000,000.

Are we, as a profession, applying all the knowledge we have to prevent this gigantic loss, annually?

We know how to test for a natural immune in diphtheria; also have developed a means of producing immunity in the susceptible; yet we still have a very material death rate from diphtheria.

Are we, as a profession, using the knowledge we have gained to make diphtheria a rare disease, if not render it non-existent?

*Address before Chicago Medical Society, March 3, 1926.

We still have a mortality from tetanus and hydrophobia, yet we have specific treatment to prevent both.

Modern investigation shows that scarlet fever can be conquered. Is the profession using this information to advantage?

The 1920 census showed that of about 30,000 cases of blindness in the United States, 3.3 per cent were due to gonorrheal ophthalmia.

Are we using our knowledge of prevention to its fullest value in this field?

If we do not educate and inform the public and create in them a demand for efficient service with the information we have gained, can we wonder at their starting societies for the prevention and cure of this and that, for the investigation of this and that disease?

It seems to the writer that we are largely at fault; we have information based upon fact and substantiated by experiment and experience, and we must get this information to the public in such a way and in their own language, so that quack clinics will have no basis for even being thought of, let alone existing. So a new cult, with its chief aim the almighty dollar, with no service rendered, will have no chance for existence.

Some one has stated that nine-tenths of human suffering is due to ignorance. If such is the case, the organized profession is not functioning to the fullest extent, where the public is concerned.

Infantile paralysis, because of its apparent increasing prevalence, will need all the attention the research investigators can give it, as it is approximately estimated there are 100,000 sufferers from the crippling effects of it in the United States today.

When we learn that at least 1 per cent of the elementary school children have serious cardiac affections—this means 200,000 children in the United States with hearts requiring systematic skilled medical supervision—we recognize another serious problem for education.

The National Committee on Mental Hygiene states that the economic loss to the United States each year on account of mental diseases is over $200,000,000—another field for educational endeavor.

The annual contribution to our criminal courts from the feeble-minded also claims attention for education of the public.

When we stop to think that cancer claims one out of every ten deaths after the age of forty, we must also recognize another problem for the public to hear about in order to receive its assistance in fighting.

Malaria, although long known to be curable and preventable, still claims an annual toll both in sickness and in death. Education of the public needed.

Industrial diseases, through systematic investigation and study, have been placed under preventable measures, but through lack of education and application of knowledge gained, still prove a problem—lack of education again.

We have our most serious problems of the wage-earning middle life yet to assail and conquer, due largely to lack of knowledge on the part of the profession and for which we cannot blame the public for not helping solve.

In 1920 pneumonia and influenza together were responsible for almost twice as many deaths as was tuberculosis—pneumonia causing 10.5 per cent of total deaths and influenza 5.4 per cent (United States Census).

Pneumonia respects no age, taking its toll from all ages and apparently is our most dreaded enemy to be attacked.

Influenza, which has given the United States at least eighteen epidemics, like pneumonia, attacks at all ages, and is next to be feared.

Diseases of heart and kidneys, of which it is estimated there are more than 5,753,000 cases now in the United States, with a death rate of 17.7 per cent, also needs the profession's concentrated attention. Our knowledge of the etiology of heart diseases being due chiefly to infectious diseases, especially in childhood, and from focal infections, with syphilis claiming its quota, would seem to give us a vulnerable point of attack upon this menace to society.

We, as a profession, are not as much concerned with the narcotic and drug addict problem, as the answer is one purely of prevention—cutting off the supply. It is hardly debatable as to whether it is a public health problem.

Diabetics, based on the estimates of Joslin, number in the United States 1,000,000 and have a death rate large enough—16.8 per cent per 100,000—to more than attract the attention of both the profession and the public.

The $195,000,000 spent annually for self-medication is a problem purely of ignorance and

one that will be solved immediately the public is enlightened.

Proper forms of education, efficiently instituted and effectually applied, will materially curtail the inroads on the public of the charlatan and quack and the isms and cults will cease to sprout in society.

It seems to the writer that a very material improvement in existing conditions can be accomplished by the institution of a comprehensive, well-organized educational campaign, employing every avenue of approach from the school book to the lecture platform, from the popular magazine to the chautauqua method, from the general practitioner to the laboratory technician.

Educating our own graduates in a broader manner than we are now doing, a curriculum embracing some public health instruction, some knowledge of the business side of life, some of psychology, economics, etc., will do a great deal, for this same individual is to go forth into the battle of life, just as much as he is to practice his profession and must be able to meet and establish contacts with society the same as other professions in life have to.

A continuous, systematic service of education of the graduate in medicine after graduation, more information from our own body and less via the detail man route, is needed.

Encourage the physician in entering and becoming interested in his community by affiliation with his chamber of commerce, retail merchants' association, church, lodge, some dinner club and all the activities for the betterment of the community of which he is a part and from which he derives benefits with the other citizens.

The day of the family doctor we hear so much about is past, just as the days of saddlebags and tallow candles is past. The modern doctor must be equipped with all the information his profession and the research men have gained for his use and, more, he must cease being a hermit and holding himself aloof from his fellow-beings.

The writer believes that the establishment of a national department, with headquarters in Chicago, as a part of the American Medical Association, for the purpose of education—both of the profession and laity, in matters pertaining to the public health of the nation—would do much in solving perplexing and exasperating problems, constantly presenting themselves to the doctor and the layman.

The Illinois State Medical Society has been one of the first societies, I believe, to consider this problem of lay education and, although a little more than a year has elapsed since its beginning, it has profited greatly by experience gained, and it has shown in this short time that the field is fertile for results.

Dr. J. R. Neal, in speaking of the work of education, says that "the direct contacts are invaluable and should, under no circumstances, be neglected. The indirect contacts—the use of friendly lay persons and organizations—can be made of much greater value to the organized medical profession than at any time during the past."

Dr. Neal, with 300 copies of "Regulations of Physicians by Law," a small brochure written by Henry Eugene Kelly of the Chicago Bar, succeeded largely in educating the members of the last Legislature for the good of the public.

Quoting from Elliott B. Edie, M. D.:

If such an organization as heretofore mentioned should be established the public must know that a strong central organization exists to help the general practitioner become efficient in the work of health preservation. They must be told that the medical schools are educating doctors according to the principle that an ounce of prevention is worth a pound of cure, and that physicians in practice are constantly receiving in practical form the valuable things learned in our national research work. We can tell about our pure food laboratories and inform the public that our members know which foods are pure, which are necessary for nutrition and which will insure good teeth; that they know how to reduce overweight persons without harming them and can fatten those who need it. We can tell of our research into the problem of exercise and point out that our members can give personal instruction in exercise adapted to persons of various postures and different occupations. The public will be interested in our mental hygiene department from which the practitioner gets instruction, enabling him to solve the behavior problems of childhood and adolescence.

We must emphasize the work done by our clinical department, to provide simple methods by which the family doctor may detect painless areas of infection.

All these activities are necessary if the general practitioner is to carry out periodic health examinations.

The purpose of this inventory is to try to call to your attention the opportunity we of the profession have. If we are to live and function as a profession, we must adjust ourselves to the times in which we are living and give more service to the public and assume leadership, or allow the public to assume the leadership and we follow.

REMARKS ON PROPHYLAXIS OF CARCINOMA OF RECTUM*

J. RAWSON PENNINGTON, M. D., F. A. C. S.
CHICAGO

We are under great obligations to Drs. Lynch and Felsen for the instructive lessons they have brought to us this evening. Now, let us "get right down to brass tacks," and determine how we can cure these poor sufferers before they become incurable:

It is the consensus of opinion that cancer *never* begins in healthy tissue. Conceding this, cancer of the rectum is a secondary disease, and as such is largely preventable. The early symptoms of cancer of the rectum, then, are those of such conditions as are responsible for the development of cancer. Such symptoms, however, are not always the precursor of cancer, any more than bleeding is always the precursory symptom of hemorrhoids.

Preventive treatment,—or rather the cure of those ailments which may lead to the development of cancer of the rectum is the treatment *par excellence*. The time to cure cancer, then, is before you get it. This means the terminal bowel should receive periodic examinations, and efficient treatment of any and all of its pathologic conditions when discovered. Moreover, such conditions should be removed by that method leaving the least possible scar or point of irritation, as cancer may develop in either.

Scar tissue produces its effect, as the French author Lumière pointed out, by cutting off the circulation to the highly-organized tissues. Hence the cells of such tissues change to those of an embryonal type, and lose their specific or differentiated character. It is a characteristic of embryonal cells to have exceptional capacity for growth; and given this capacity, malignant tumors may develop both from absence of the constitutional resistance, and absence or diminution of the local one.

Evidently the cause of the irritation must be long continued, for acute traumas are so frequent—especially in industrial workers, soldiers, etc.,—that the ravages of malignant tumors would be vastly increased. For instance, the frequency of cancer of the uterus and of the mammary gland is attributed to the rapid hypertrophy and involution of these organs during the pregnant condition.

Cancer of the rectum may begin in the scar following operations for fistula or for hemorrhoids. It may occur in incontinence of feces following an operation for fistula. (In this connection gynecologists are advocating removal of uteri with intractable discharge from lacerations of the cervix of long standing). It may be engrafted on hemorrhoids. It may be provoked by (or develop upon) pruritus ani, may occur in connection with fistula, ulcer, fissure, stricture, fibrosis of the rectal valves, constipation, and so on. I have had examples in each of the foregoing-named conditions. In view of this I should say that the most important treatment of cancer of the rectum is that by prevention.

If a fire is raging, the best time to save one's house is before it is attacked. What is the use of trying to quench the fire when the house is enveloped in flames, and all the adjacent property is on fire? So it is with treatment of cancer of the rectum: That is, protect and save the patient before the cancer fires are started. In other words—and to repeat—prevention is the treatment *par excellence*.

How is the present status towards cancer of the rectum to be improved? First, by educating the public to submit to periodic examinations. Second, by better instruction in proctology at our medical colleges. Today students are turned out as full-fledged doctors, with much knowledge about lengths of microbes in microns, and similar information, but little or no practical knowledge about rectal diseases.

As regards cancer in general, the opinion seems to be gaining ground that it is a constitutional disease, and governed by some controlling agent, absence—or lessening—of which plus diminished local resistance leads to development of malignant growths. The source of this controlling agent is unknown. The endocrine glands, of course, have been accused. Sendrail in France, last year, suggested a biochemic origin—difference between the ionic and lipoidal equilibrium of the blood plasma.

He also observes the cancer produced experimentally by application of tar, etc., is less a cancer due to irritants than the reaction of the tissues to some constitutional agent. Even in experimental cancer the negative results are frequent, showing—I presume—that the con-

*Amplified discussion of the papers of Dr. Jerome M. Lynch and Dr. Joseph Felsen, New York, read before the Chicago Medical Society, Feb. 17, 1926.

stitutional resistance is sufficient. Therefore, it seems to me that since certain individuals among our patients may have this constitutional resistance impaired or lost, it is all the more important for us to act promptly to prevent loss of the local resistance. The latter corresponds to what Bang terms "biologic malignity," that is to say the latent precancerous state.

If a little more attention relatively were given by our schools to proctology and a little less to micrology, there would be need for fewer abdominoperineal operations with permanent colostomy; to say nothing of prolonged longevity and human comfort. In the language of the late Dr. A. J. Ochsner we need: "A large number of medical teachers who can, and will, teach medical students the essentials of medicine in the shortest possible time, without cluttering up their minds with a lot of non-essentials."

[Since writing the above I have read the brochure issued by the Metropolitan Life Insurance Co., "Cancer Mortality Among Insured Wage Earners and Their Families." This recounts the experience of the Industrial Department from 1911-22. From it we learn cancer of the peritoneum, intestines and rectum ranked second in numerical importance among males, and fourth among females. They were responsible for 11,077 deaths, a crude death rate of 8.6 per 100,000, or approximately to one-eighth (12.3%) of the total cancer mortality. I wish to call attention to the following passage which emphasizes my own remarks above: "The upward death rate for cancer of these organs is unmistakable, amounting to 1.5 per cent. per year of the mean standardized death rate. In particular, among white males and white females, the uniform annual increments were 1.91 and 1.30 per cent. per year."]

DOES SMOKING EFFECT THE VISION?

FRANK L. ALLOWAY, B. SC., M. D.
CHAMPAIGN, ILL.

The question of the effect of tobacco smoking on the visual acuity is of interest not only to men who have used it for a great number of years, but also to the vast number of women who have in recent years acquired the habit of the drug.

In making tests to determine the effect of the drug three classes of people were tested, non-smokers, light smokers and heavy smokers. Two cigarettes were found to be equal in effect to one cigar if fully smoked and inhaled.

In performing these experiments the usual test-type found in the eye-specialist's office, known as Snellen type were found to be unsatisfactory. A test called the Ive's visual acuity test was used. This is the most accurate of all the subjective tests for vision.

In order to avoid any other person's influence in the test each man under observation manipulates the test himself by means of a small hand-wheel belted to the movement of the test object.

The tests were carried on in a dark room. The lighting of the test-chart was regulated so every test was the same.

The non-smokers were tested; then they smoked two cigarettes. The test was made during smoking, ten minutes after smoking; then one hour after. The result was found to be a slight rise in visual acuity while smoking, below normal ten minutes after, and back to normal in one hour.

The moderate smoker had a slight increase in vision while smoking and a return to normal in ten minutes after smoking was discontinued. The heavy, habitual smoker showed no difference in any of the tests before, during or after smoking, although it was found that the heavy smoker usually had a conjunctivitis or inflamed condition of the upper and lower eyelids.

Of course in making interpretations from such a test, caution must be used as many uncontrollable factors enter all vision tests. Practice as well as fatigue must be taken into consideration. One of the greatest difficulties encountered was the fact that most of the men tested were habitual smokers, therefore they were never at any time wholly free from the effects of smoking.

Another thing that must be borne in mind is the effect of this habit on the general system, such as the graver functional disturbances.

The cause of the rise in visual acuity is probably due to a general stimulation such as that produced on a horse when you whip him and he starts forward for a while then drops back into his old gait until you touch him with the whip again. If there is any harmful effect on the vision due to smoking it is very little, especially in the moderate use of the weed.

The U. S. Army School of Aviation Medicine has made tests like the above with somewhat

similar results. Mr. Underwood in his general work on the effect of the use of tobacco on the human system went into the subject, but his tests were not as finely balanced.

209 University Ave.

PYLORIC STENOSIS* (Abstract)

JOHN GRAHAM, M. D.
CHICAGO

Pyloric stenosis was first described by Armstrong in 1777. The results obtained in the treatment of this condition have been brilliant, in twenty years the mortality from operation dropping from 65 per cent. to 5 to 10 per cent. Owing to the pathognomonic symptoms the condition whether it be the spasmodic or hypertrophic type is readily recognized.

More than 80 per cent. of the cases occur in males. The child presents a definite train of symptoms. At first apparently healthy, it begins to vomit, loses weight, becomes dehydrated and has a reduction in the bowel movement. A pyloric wave is visible and a mass is palpable in the right side of the stomach. In his series of cases x-ray examination was not resorted to and there was one error in diagnosis.

G. F. Still in 1923 reported 248 cases of which 37 were females. In this series of 78 cases treated with gastric lavage 43 recovered and 35 died, making a mortality of almost 50 per cent. He favored the Rammstedt operation, though he had 11 deaths in 28 cases. He then abandoned this method and resorted to forceful dilatation.

As to the prognosis, Richter claims that the delay in operating is the greatest cause of death, the danger to the baby being greatly increased by excessive loss of weight and the conditions associated with starvation and tissue dehydration. The prognosis also depends on the skill of the operating surgeon, the pre- and postoperative care. The mortality in artificially fed babies is more than three times that for breast fed babies.

A review of 450 cases operated on by the Fredet-Rammstedt method shows that the mortality of his series has decreased gradually until for the period since January, 1923, it is less than 10 per cent. This is attributable not only to the greater proportion of favorable cases, but also to certain changes in pre- and postoperative care.

The duration of the symptoms prior to operation is probably the most important single factor affecting the prognosis. If the condition is kept in mind prompt prognosis may be made in practically every instance. The question of operation should be taken up as soon as the diagnosis is made, and operation carried out in all but mild cases in which symptoms are relieved by medical treatment within one week.

The method of operation used in curative and the result permanent. The operation itself is relatively simple, and with reasonable care carries little danger. Transfusion is of great value before and after operation in poorly nourished babies. Local anesthesia is desirable in most cases.

No operation requires more precision in technic and more attention to details. Every minute detail may mean a reduction in the mortality.

In his work Dr. Graham follows a definite technic. The operating room is superheated. The operation is performed under local anesthesia and during the operation the baby is allowed a nursing bottle containing a small amount of water. The incision is an extreme right sided one to avoid injury to the small bowel. Hemostasis should be complete.

Feeding is resumed immediately after the operation. In a series of 45 cases he has had no recurrence of the symptoms which existed previous to operation.

DISCUSSION

DR. L. W. SAUER said the diagnosis was very easy provided the doctor takes the time to study the case. Not infrequently these babies have been under the care of the obstetrician or the family physician and the condition not recognized. If a baby vomits and does not gain and if the vomiting starts after the first week and especially after the eighth week, it is pretty evident that a pyloric stenosis is present. Finkelstein was the first one to palpate the tumor in these cases. The peristaltic waves can nearly always be seen. Dr. Sauer adopts the method of examining the baby, then having the mother give it a bottle, and returning in 15 minutes to watch the peristaltic waves. These start in the left upper epigastric region and move at first diagonally across in the right costal region. Sometimes from one to three waves are visible. Not seeing the waves would not necessarily exclude pyloric stenosis. Palpation of the tumor takes quite a little skill. Men like Downes, Still and Graham who have seen many of these patients can undoubtedly palpate the tumor and distinguish the condition from anything else in the abdomen. About four out

*Address before North Shore Branch Chicago Medical Society, October, 1925.

of every five cases never get to the surgeon. They are cured by medical management. They are given thick food in small quantities every three hours and also atropin, 1/500 of a grain, one drop being added to each feeding.

In referring these patients for surgical treatment, one should select a surgeon of experience in children's surgery.

DR. A. H. MONTGOMERY referred to the pathology in this condition. He has seen specimens of these hypertrophic pyloric cases before operation and also specimens removed at postmortem some months after operation. The hypertrophy affects only the muscular layer and not the mucosa and this explains the efficacy of the operation. Many of these cases have only a relative degre of stenosis and as a rule some food goes through and that explains why many of these cases can be treated by medical management.

Dr. Sauer referred to the presence of adhesions. In the specimens which Dr. Montgomery has seen there have been no adhesions.

Regarding the operative treatment, he thought Dr. Graham's point about not allowing the small intestine to prolapse on the abdomen was well taken. One of the safe measures is to grasp the pylorus between the thumb and finger and block the opening in that way.

DR. H. P. SAUNDERS asked whether there was a tendency for this condition to arise several times in the one family. He has had the unusual experience of having three babies in succession born to the same mother and all developed pyloric stenosis.

DR. G. B. LAKE asked the formula for the local anesthesia employed.

DR. JOHN GRAHAM: A 1% procain is dissolved in triple distilled water which has been autoclaved for forty minutes. This is allowed to boil for three minutes, and cooled to sixty degrees. After which one gram of clorotone to the 100cc of the above mixture is added. Just at the time the injection is to be made for the anesthetic four drops of the adrenalin is added. Adrenalin must be fresh.

In answer to Dr. Saunders, he had never seen two cases in the same family.

He thought Dr. Montgomery's suggestion of blocking the opening to prevent prolapse of the intestine was valuable.

I have had no experience with feeding babies with pyloric stenosis, though each one of my cases had been under the care of a pediatrician before being submitted to operation.

STRANGULATED HERNIA IN AN 18-DAY OLD BABY. OPERATION. RECOVERY.

BENJ. H. BREAKSTONE, B. S., M. D.
Surgeon in Chief, West End Hospital
CHICAGO

On March 1, Dr. A. M. Sewell delivered a male child. There was nothing abnormal about the delivery. March 19, 1926, Dr. Sewell was called again about noon to the home of this infant. The mother complained that the baby had been vomiting for several hours and cried. On examination, a mass was found in the right inguinal region, about the size of a pigeon's egg. This swelling appeared suddenly and it was impossible to reduce it. Dr. Sewell again called in the evening, when he found that the child had fecal vomiting, and thereupon diagnosed strangulated inguinal hernia containing bowel (enterocele). The child was then brought to the West End Hospital about 9:30 p. m., Friday, March 19.

I examined the patient carefully and agreed with Dr. Sewell as to the diagnosis, thereupon advising immediate operation, for the patient had already shown signs of emaciation, having lost in weight and looking marasmic; whereas, the history stated it was a plump child when it was born.

We operated on this case without an anesthetic, thus proving that before an infant is a month old it does not have any pain, for, after it became used to the discomfort of being held, it stopped crying, looked around at us and seemed to feel perfectly content to suck on a sugar pacifier. On opening the inguinal canal we found the congenital sack containing cecum, appendix and a small part of the ileum. Before opening the sack one would think of a hydrocele of the cord, which is much more common than the rare condition we found in a child of that age (18 days). This mass came through into a congenital sack. The appendix was removed, a radical operation for the cure of the hernia performed in my usual way, leaving the spermatic cord right beneath the skin and superficial fascia, sewing up the skin with silk-worm gut, using kangaroo tendon for Poupart's ligament.

The child made an uneventful recovery, ceased vomiting immediately after operation, and is gaining in weight. We believe this one of the youngest cases on record which was diagnosed and operated on for a strangular hernia, the sack of which contained the appendix, 1¾ inches long, which was cyanotic looking, as was the strangulated ileum and cecum.

It may be remarked that in an infant the cecum and appendix are freely movable and may be found in almost any part of the abdomen. It may be even pulled out of the wound some distance.

We have learned from watching circumcisions by "mohelim" that it is not necessary to use an

anesthetic the first month of a child's life. The only aid we might have received by using an anesthetic would be perfect relaxation of abdominal wall and abdominal contents, which we did not have in this case.

Society Proceedings

ADAMS COUNTY

The regular monthly meeting of the Society held at the Elks' Club, Quincy, April 12, 1926, and was called to order by the President at 8:15 P. M. Thirty-seven members and two guests were present.

The Secretary read a telegram from Dr. J. W. H. Pollard to the effect that he would not be able to be present to give the health survey of Adams County at this meeting, but would be glad to present it at the May meeting. The Secretary read a communication from Mr. R. R. Swaynie of the Swaynie Bath System asking the society for certain advice. After some discussion Dr. Koch made a motion that a committee be appointed to confer with Mr. Swaynie. Seconded and carried. The President appointed Drs. Koch, Williams and Center on this committee. The Secretary read a letter from Miss Amelia Eichenauer, Chairman of the Crippled Children Committee of the Women's Luncheon Club, asking for information as to what use the funds that had been raised to purchase braces for crippled children by the Women's Luncheon Club and the Business Women's Club could be used. Dr. Center made a motion that the Chairman appoint a committee of three to confer with these clubs in regard to the above, the committee to consist of one physician from each local hospital and these two to appoint a third. Seconded and carried. The President appointed Drs. Center and Shulian. The Secretary read a communication from the Illinois State Department of Health to the effect that the Governor had proclaimed the week of April 25 to May 1 as public health week. The chairman ruled that the manner in which the medical society participate in this week be placed in the hands of our Public Health Committee, Dr. Center, chairman. The Secretary then read the following resolution and moved that it be adopted:

Resolution in Favor of Section of Radiology in The Illinois State Medical Society

WHEREAS, The Central Illinois Radiological Society and the Chicago Roentgen Society, the only Illinois Radiological Societies, the members of which are members of the Illinois State Medical Society, have unanimously resolved to favor the creation of a Section of Radiology in the Illinois State Medical Society, and

WHEREAS, The American Medical Association and several of the State Societies have already created a Section of Radiology, and

WHEREAS, All the National Radiological Societies, the members of which are members of the American Medical Association, have approved of the formation of Sections of Radiology in the respective State Societies, and

WHEREAS, The formation of a Section of Radiology in the Illinois State Society will do much to elevate the radiological profession in Illinois and keep it in the hands of qualified physicians and also increase the attendance at the annual meetings of the State Society, be it therefore

Resolved, That the Adams County Medical Society urge the House of Delegates of the Illinois State Medical Society to establish a Section of Radiology and recommend that the delegate of this society vote for same at the 1926 meeting of the Illinois State Medical Society at Champaign and that a copy of these resolutions be sent to the Secretary of the Illinois State Medical Society to be read to the Council and the House of Delegates.

The above was seconded by Dr. Pearce and carried without a dissenting vote. A communication from the Illinois Tuberculosis Association in regard to conducting a Tuberculosis Clinic in this county was read. The President ordered that this communication be placed in the hands of the Program Committee with the addition of Dr. Pearce, for whatever action they wished to give it. The application of Dr. H. Claude Fortune of Payson, Ill., was read and ordered turned over to the Board of Censors. Dr. J. Tully Snider of Coatsburg was elected a member of the Society.

The scientific program consisted of motion pictures by Drs. Walter Stevenson and Ray Mercer on various eye, ear, nose and throat operations that they had performed on the cadaver. The picture was thoroughly discussed by the membership. Following this Dr. H. J. Jurgens gave a case report on a case of "Ectopic Pregnancy" and Dr. W. S. Knapheide gave a case report on "A Fractured Tibia." Both of these reports were extensively discussed. Through the courtesy of Dr. Harold Swanberg motion pictures were then shown of "Gastric Motor Phenomena" by Dr. Lewis G. Cole, New York City, and "How the Fires of the Body Are Fed," by the U. S. Public Health Service. These pictures were very interesting and instructive, describing the various phases of digestion studied by the X-ray. Dr. Shulian discussed the value of such educational work.

The meeting adjourned about 11:00 P. M.

HAROLD SWANBERG, M.D.,
Secretary.

COOK COUNTY

CHICAGO MEDICAL SOCIETY

Regular Meeting, March 31, 1926

Nephritis, Frederick M. Allen, Morristown, N. J. Discussion, J. P. Simonds, A. J. Carlson, Prof. Physiology University of Illinois, Arthur R. Elliott.

Joint Meeting of the South Side Branch With the Chicago Medical Society, April 7, 1926.

The Decompensating Heart—1. In Childhood, I. A. Abt; 2. In Obstetrics, Jos. DeLee; 3. In Adult Life, Chas. Mix; 4. A Surgical Complication, Jas. Monahan.

Regular Meeting, April 14, 1926.

Hypogonadism, Wm. Engelbach, St. Louis, Mo.

Discussion, James H. Hutton, Prof. A. J. Carlson, University of Chicago, and Frank Wright.

Joint Meeting Chicago Medical Society and the Chicago Society of Industrial Medicine and Surgery, April 28, 1926.

1. Disarticulations and Fractures of the Pelvis (lantern slides), B. F. Lounsbury. Discussion, John A. Wolfer and Hugh N. MacKechnie.

2. Unusual Injuries to the Knee Joint, with motion pictures and lantern slides, C. R. G. Forrester. Discussion, F. A. Chandler and Robert O. Ritter.

Personals

Dr. E. J. Berkheiser, Chicago, addressed the Will and Grundy County Medical Society, at Joliet, April 14th, on "Diagnosis of Vertebral Lesions."

Dr. Ralph H. Kuhns, director of the Department of Pediatrics at the Illinois Post-Graduate Medical School, Chicago, spoke April 14th before the Parent Teacher Association of Elmhurst on the subject of the "20th Century Child"; and will speak May 11th at a joint meeting of the Rock Island and Scott Co. Medical Societies at Moline on the subject of "Asthma in Childhood."

Dr. Harold Douglas Singer has resigned as medical director of the Illinois Society of Mental Hygiene.

Dr. Carl A. Hedblom addressed the Chicago Tuberculosis Society, April 8, on chest surgery.

A farewell dinner was recently tendered Dr. Clarence T. Roome, Evanston, who recently resigned as health officer after fifteen years' service.

Prof. Robert H. Gault, Ph. D., of Northwestern University, Evanston, was the guest of honor of the Chicago Laryngological and Otological Society, April 5.

Dr. Arthur Steindler, professor of orthopedics, State University of Iowa College of Medicine, Iowa City, addressed the Chicago Orthopedic Society, April 9, on "Scoliosis."

Dr. Emmet Keating spoke on "Medical Policies and How They Affect You," at a luncheon given by the Women's Bureau of the Illinois Manufacturers' Association at the Hotel La Salle, April 10.

Dr. Duncan D. Monroe, formerly of Dawson Springs, Ky., has been appointed superintendent of the new $150,000 Madison County Tuberculosis Sanatorium, which will be formally opened May 7.

Dr. Howard L. Metcalf, Springfield, has been appointed medical director of the Springfield Life Insurance Company, and Dr. John C. Eigenmann, Mechanicsburg, assistant medical director.

Dr. Harry A. Singer and Bertha Kaplan, among others, addressed the Chicago Pathological Society at the John Crerar Library April 12 at 8, on "Streptococcus Erysipelatus Toxin-Antitoxin."

Dr. Harry L. Parker, Mayo Clinic, Rochester, Minn., addressed the Chicago Neurological Society at the Drake Hotel, April 15, on "Involvement of the Central Nervous System Secondary to Primary Carcinoma of the Lung."

Dr. Thomas Parran, Jr., U. S. Public Health Service, who has been on duty with the Illinois Department of Health in connection with rural health work, has been relieved; he will go as a representative of this country to the International Health Conference in Denmark in May. A farewell dinner was tendered Dr. and Mrs. Parran at Springfield March 27.

Friends of Dr. Charles Davison, emeritus professor of surgery, University of Illinois College of Medicine, gave a dinner in his honor at the Congress Hotel, April 16, at which a bust of the guest of honor made by Lorado Taft was presented to the University of Illinois. A certificate was presented to Dr. Davidson appointing him attending surgeon emeritus at the Cook County Hospital, on which staff he has served continuously for thirty-two years. Among the speakers at the dinner were David Kinley, L. L. D., president of the University of Illinois; Dr. David J. Davis, dean of the college of medicine; Dr. Edward L. Heintz, an alumnus of the university and chairman of the committee in charge of the dinner; Lorado Taft; Anton J. Cermak, president, board of county commissioners, and Hon. William L. Abbott, ex-president of the board of trustees of the university.

News Notes

—The July issue of *Medical Life* will be a stomatology number devoted entirely to the "History of Stomatology" by Dr. A. J. Asgis of New York. The issue will be profusely illustrated. There will also be a chapter by E. B. Hardisty on "Stomatologic Education in the

Medical and Dental Schools in the United States in 1926."

—Mr. E. F. Holmes has bequeathed $100,000 to the University of Chicago to further research on the problem of cancer; Miss Harriet F. Holmes, a daughter, has been associated with Maude Slye, Ph.D., in cancer research at the university for many years.

—The dental operating room and the oral surgery unit in the new Passavant Memorial Hospital will be dedicated as a memorial to George H. Cushing, D.D.S., who founded the Chicago Dental Society and the Illinois Dental Society, and was one of the organizers of the American Dental Association.

—The faculty and student council of Rush Medical College of the University of Chicago held an informal reception in the library of the new Rawson Building, April 9, at 8:15; Dr. Frank Billings, for many years dean of the faculty of Rush College, gave an address.

—The Chicago Roentgen Society and the Central Illinois Radiological Society will hold a joint meeting at Champaign, May 18, during the annual meeting of the Illinois State Medical Society; physicians are invited to attend. Programs can be obtained by writing to Dr. Harold Swanberg, 731 Hampshire Street, Quincy.

—For the first time in years the Mississippi Valley Conference on Tuberculosis will be held in Chicago, June 14-17, at the Edgewater Beach Hotel. There will be representatives from the tuberculosis associations of Ohio, Indiana, Illinois, Michigan, Wisconsin, Iowa, Missouri, North Dakota, South Dakota, Minnesota and Nebraska. The purpose of the conference will be to discuss plans for future needs in tuberculosis work.

—More than 400 Chicago physicians, and thousands of nurses and orderlies, according to *Hospital Progress*, will be available during the International Eucharistic Congress, June 20-24, to care for the health of the great number of persons that is expected to be present. There will be a temporary hospital at St. Mary's on the Lake at Mundelein, Ill., eight first aid stations near Grant Park Stadium in Chicago, where the principal ceremonies will be held, and other stations at the Municipal Pier and at the Coliseum.

—The April 23 meeting of the Institute of Medicine of Chicago at the City Club was devoted to the presentation of work by Chicago investigators; there were in all nine papers presented. Dr. B. Brouwer, professor of neurology, University of Amsterdam, gave an address, April 22, under the joint auspices of the institute and the University of Chicago at the Harper Memorial Library on "The Projection of the Retina on the Brain"; Sir Arthur Newsholme, London, England, will lecture at the Harper Library, May 10 and May 11, 4:30 p. m., on "The Present Position of the Tuberculosis Problem" and "The Growth of Social Insurance in Britain."

—Founded sixteen years ago as a research organization connected with the juvenile court, the Institute for Juvenile Research now is operated by the state. Friends of the institute are raising $275,000 to finance a five year research program; they recently held a luncheon at the Hotel Sherman, which was attended by more than a thousand persons. Among the speakers were Dr. Adolf Meyer, Henry Phipps professor of psychiatry at Johns Hopkins University School of Medicine; William A. Neilson, president of Smith College; Dr. Ludvig Hektoen, Dr. Isaac A. Abt and Prof. Charles E. Merriam, Ph.D., of Chicago. The secretary of the committee, Joseph H. Schaffner, 36 South Franklin Street, reported that more than $175,000 had been raised toward the research fund.

—In addition to the examination held at Dallas on April 19th and at San Francisco on April 27th, another examination will be held by the American Board of Otolaryngology at the Otolaryngological Clinic, Royal Victoria Hospital, Montreal, on Tuesday, June 1. Information may be secured from the Secretary, Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Missouri.

The International Union Against Tuberculosis will meet September 30 to October 2 in Washington, D. C., immediately followed by the annual conference of the National Tuberculosis Association October 4 to 7.

Preliminary arrangements for the international meeting of the National Tuberculosis Association indicate that several of the leading tuberculosis specialists from different European and other foreign countries will be in attendance.

Among the distinguished men and women who have definitely promised to attend and address the meetings of the National Tuberculosis Association are Sir Robert Philip, the founder of the world-famous dispensary system of Edinburgh; Col. S. Lyle Cummins of Cardiff, Wales, director of the King Edward the Seventh Research Foundation for Tuberculosis; Dr. G. B. Roatta of the Tuberculosis Dispensary of Florence, Italy; Prof. Gaetano Ronzoni, professor of medicine at the University of Milan, Italy; Dr. Vittorio Ascoli, professor of medicine at Rome; Dr. Leon Bernard of Paris, professor of hygiene and secretary of the French National Tuberculosis Association; Dr. Edouard Rist of Paris, physician to the Laennec Hospital; Dr. Ferdinand Sauerbruch of Munich, one of the world's leading authorities on chest surgery; Prof. Frederick Neufeld of Berlin, director of the Robert Koch Laboratories; Prof. Lydia Rabinovitch of Berlin, one of the foremost bacteriologists, and Prof. Hans Christian Jacobaeus of Stockholm, Sweden, known throughout the world for his skill in surgery of the chest. It is expected also that among others who may attend the meeting will be Dr. A. Rollier of Leysin, Switzerland, a leading authority on heliotherapy; Dr. F. N. Kay Menzies of London, authority on colonies for cured cases of tuberculosis, and Sir George Newman of London, Minister of Health of Great Britain.

A number of other European and Asiatic tuberculosis specialists have also been invited to attend this meeting. It is anticipated that in quality of material to be presented this international meeting of the National Tuberculosis Association will excel any similar gathering since the International Congress on Tuberculosis of 1908.

Special arrangements will be made for interpreting foreign language papers. All of the papers will be published in the annual volume of Transactions of the National Tuberculosis Association. The sessions of the National Tuberculosis Association are open to all persons interested. The sessions of the International Union Against Tuberculosis are open only to members.

Further information about either of these meetings may be obtained from the Chicago Tuberculosis Institute, 360 North Michigan Boul., Chicago, Ill.

Deaths

ALONZO DEXTER BLAGDEN, Sycamore, Ill.; Bennett Medical College, Chicago, 1886; member of the Illinois State Medical Society; aged 74; died, April 2, of heart disease.

CLINTON G. BUFFINGTON, Decatur, Ill.; Missouri Medical College, St. Louis, 1881; aged 66; died suddenly, March 14.

ELTON ARTHUR CHLOUPEK, Oak Park, Ill.; College of Physicians and Surgeons, Chicago, 1899; aged 51; died, April 3.

FERDINAND FISCHER, Carlyle, Ill.; Eclectic Medical Institute, Cincinnati, 1879; aged 76; died, March 28.

EDWARD J. GABRIEL, Payson, Ill.; St. Louis College of Physicians and Surgeons, 1891; aged 57; died, March 11, at the Blessing Hospital, Quincy.

JARED CHARLES HEPBURN, Chicago; Chicago Medical College, 1890; on the staff of St. Bernard's Hospital; aged 62; died, March 17, at Phoenix, Ariz., of heart disease.

GEORGE SNOW ISHAM, Chicago; Chicago Medical College, 1884; aged 66; died, March 26, at Pinehurst, N. C., of pneumonia.

WILLIAM C. A. LEIPOLD, Chicago; Hering Medical College, Chicago, 1896; aged 63; died, April 2, of intestinal obstruction due to peritoneal adhesions.

CARLL CASPER METHOD, Elmhurst, Ill.; Northwestern University Medical School, Chicago, 1925; aged 27; died in March of injuries received when the automobile in which he was driving was struck by a train.

GEORGE STEPHEN MIKKELSEN, Kewanee, Ill.; Chicago College of Medicine and Surgery, 1907; aged 43; died, March 9, at a hospital in Chicago.

JOHN W. MILLER, Wayne City, Ill. (licensed, Illinois, 1888); aged 78; died, March 11, at the Deaconess Hospital, St. Louis, of pneumonia.

HARRY SCHUYLER OYLER, Lincoln, Ill.; Marion-Sims College of Medicine, St. Louis, 1901; served during the World War; aged 55; died in March, at the Deaconess Hospital, of interstitial nephritis.

EBENEZER LEE PALMER, Noble, Ill.; Eclectic Medical Institute, Cincinnati, 1877; also a druggist; aged 71; died, March 23, at the Olney (Ill.) Sanitarium, of diabetes.

THOMAS JOHN SULLIVAN, JR., Chicago; University of Illinois College of Medicine, Chicago, 1915; member of the Chicago Orthopedic Club; on the staff of the Mercy Hospital; served during the World War; aged 36; died, March 23, of chronic nephritis.

ANDREW TEN BROOK, Bloomington, Ill.; Jefferson Medical College of Philadelphia, 1876; aged 72; died, March 30, of cerebral hemorrhage.

JOHN C. WHITE, Seatonville, Ill.; M.R.C.S. and L.R.C.P., England, 1867, L.R.C.P., Edinburgh, and L.S.A., London, 1868; for many years postmaster of Seatonville; aged 79; died, March 22, at Decatur, of pneumonia following erysipelas.

JOHN M. WILKINS, Martinsville, Ill.; Vanderbilt University Medical Department, Nashville, 1878; Civil War veteran; aged 80; died, March 20, of valvular heart disease.